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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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VIEWS IN THE COAL TRADE.

W. P. Rend, of Chicago, who has extensive interests in the coal fields, is in London to make a comprehensive investigation of the possibilities of American coal in Great Britain. He proposes to explode, by analytical test, the British theory that Yankee fuel is inferior in steam productiveness to coal from the standard mines of Wales.

"England has lost her Mexican trade" said he, "and she is now losing also what she had in South America. The total disappearance of her coal trade with European countries is only a question of time. America has already despoiled her of much of this business, and we are traditionally famous for keeping what we once get our hands on.

"One has only to consider the fact that we are able to lay coal down at Cardiff, Wales, for less than \$3 a ton, while the Welsh miners themselves cannot afford to do it for less than \$5.50, to understand that the competition has reached a point where it leaves England altogether out. It is safe to say that the time is not far off when every great producing company in our country will operate its own fleet of ocean carriers."

"Within the next two years we should be in a position, with fair opportunities for transporting our coal, to sell 5,000,000 or 10,000,000 tons of it to European countries annually."

This is the fashion in which President C. J. Wittenberg, of the Chesapeake & Ohio Coal & Coke Co., sums up the conditions indicated by the present foreign demand for American coal. Mr. Wittenberg returned from Europe on the Majestic last week, after a two months' trip in England, France and Denmark.

"Inquiries are being made for American coal by both the French and the Italian governments for their respective navies," he said.

Mr. Wittenberg said he now had on hand unfilled orders for 200,000 tons for Italy.

AMERICAN COMPETITION.

In the course of his presidential address to the members of the Swansea Royal Metal Exchange, on the 14th, Sir John J. Jenkins accounted an interesting conversation he had had with Mr. Carnegie a week or two ago. At the present moment American manufacturers are sellings bars in South Wales at rates varying from £5 2s. 6d. to £5 10s. per ton, prices with which our steel manufacturers find it impossible to compete.

In the course of the conversation alluded to, Mr. Carnegie had explained this by saying that in America he

could get prices free from competition, because of the duties that were imposed on everything that was imported from other countries, and added that when he could keep his mills fully employed his cost was so much reduced that he could send his surplus to England, sell it below cost and yet make large profits. Any attempt to retaliate by the imposition of duties in England would not succeed.

It seemed to Sir John Jenkins, however, hard on manufacturers, particularly when it was remembered that under the Protectionist system the production of the states was increasing at an enormous rate. Two years ago, he said, our manufacture of pig iron was larger than that of the states, but this year theirs exceeded ours to a very large extent. South Wales manufacturers had been in similar difficulties before, but he had no doubt though at the present moment the difficulties seem very formidable, we would still be able to find means to compete successfully with our rival.

TRAFFIC THROUGH THE ST. MARY'S FALLS CANAL.

STATISTICAL REPORT OF LAKE COMMERCE THROUGH CANALS AT SAULT STE. MARIE, MICHIGAN AND ONTARIO, FOR THE MONTH OF AUGUST, 1900.

EAST BOUND.			
Articles.	U. S. Canal.	Canadian Canal	Total.
Copper.....net tons	16,737	660	17,397
Grain.....bushels	648,913	15,000	663,913
Building stone.....net tons	7,895	620	8,515
Flour.....barrels	667,425	74,520	741,945
Iron ore.....net tons	2,417,724	142,117	2,559,841
Iron, pig.....net tons	1,421	.....	1,421
Lumber.....M. ft. B. M.	118,388	1,676	120,064
Silver ore.....net tons	.....	.....	.....
Wheat.....bushels	2,191,110	948,936	3,140,046
General mdse.....net tons	12,460	958	13,418
Passengers.....number	5,367	4,343	9,710
WEST BOUND.			
Coal, hard.....net tons	57,073	2,400	59,473
Coal, soft.....net tons	527,034	64,688	591,722
Flour.....barrels	.....	.....	.....
Grain.....bushels	.....	13,000	13,000
Manufactured iron.....net tons	8,188	6,516	14,704
Salt.....barrels	75,241	300	75,541
General mdse.....net tons	41,094	9,911	51,005
Passengers.....number	6,734	3,409	10,143
Freight—			
East bound.....net tons	2,800,359	185,913	2,986,272
West bound.....net tons	644,723	83,779	728,502
Total freight.....net tons	3,445,082	269,692	3,714,774
Vessel passages—			
Number.....	2,507	486	2,993
Reg'd tonnage.....net tons	2,923,382	320,094	3,243,476

Compiled at St. Mary's Falls canal, Michigan, under direction of Lieut.-Col. G. J. Lydecker, Corps of Engineers, U. S. A. Joseph Ripley, Asst. Engr. and Genl. Supt.

THE Holland Torpedo Boat Co. has notified the U. S. Navy Department that four of the six submarine boats authorized by Congress will be built by Lewis Nixon's firm at Elizabethport and two of the boats by the Union Iron Works of San Francisco. The plans for these six boats are being considered by the board of construction. The specifications call for a craft somewhat larger than the Holland and smaller than the Plunger, the latter being in course of completion at Richmond, Va. A contract with the Holland people will permit considerable latitude, and will not be severe in governmental requirements.

HOW JACK FROST GOT THE PROPELLER OFF.

In the winter of '91—I forget the exact date—homeward bound from the Argentine Republic to Antwerp, we called in to discharge part cargo at Dunkirk, in the north of France. On getting out of Dunkirk we struck the stone pier and broke a propeller blade short off at the "boss," and half of another one. The propeller was four-bladed, cast in one piece, so, after limping around the coast and up the river Scheldt to Antwerp, orders came from the superintendent engineer to put into drydock and take the old propeller off and put on a spare one which we had stowed in the fore peak.

The repair work on an English steamer is always directly conducted by the second engineer, or, as we would call him, the first assistant, with the chief, of course, as an advisory committee of one, the chief's principal work being (on a tramp such as was our ship) to make nice indicator cards with a templet for the inspection of the "super," write out a list of stores, and abuse the poor second for not getting two week's work done in three days.

To return to my story. We got the balance of our cargo discharged and were duly warped into dry dock. The propeller, as near as I can recollect, was 12 to 14 feet in diameter, and had been on for several years. The taper pin, nut and washer were removed with considerable difficulty, but the propeller? We tried to pull it off; we rigged a swinging ram and tried to ram it off; we took out a length of shaft in the tunnel (shaft alley—American) and tried to pull the tail ends shaft in; then we got a large sheet of iron and built a fire around the propeller to expand it, and went through the same program once more—but all to no purpose. Only one other course seemed left, and that was to cut the boss through on one side, from end to end and wedge it off.

All this time, two days and a half, the Scottish chief was swearing in broad Lowland Scotch at dock gates, propellers in general and American second engineers in particular—which meant me. I just about made up my mind to use the balance of my strength left in me to give that Scotsman a good old-fashioned Yankee licking and then send in my resignation, when a sudden thought struck me.

When in Germany I had seen quarrymen on the Rhine going around in the winter time on the top of the great basaltic cliffs and pouring water down in the cracks. The expansion of the water in freezing loosens these hexagonal columns of basalt, and the spring time a few prys with a crowbar will send tons of stone thundering to the valley below.

For the benefit of those who are not up in marine work I may here mention that the propeller boss is chambered out in the center, and fits the tapered shaft at the ends only. The fire was put out at once and a man set to work to drill and tap a 3/4 inch hole into the chambered part of the boss. While this hole was being drilled between two blades on top, another man was chipping a gutter 1/4 inch deep from end to end of the propeller boss on the bottom. When the hole was drilled and tapped a similar gutter was chipped on the top side of the boss. We then made a lower block of a tackle fast to each side of the propeller and fastened the upper block to the mooring cleats on the quarter deck and chocked the falls. Then the chamber was filled with water and a 3/4 inch bolt was screwed into the hole. This was possibly unnecessary but was done to be dead sure. This job was finished about 4 p. m., and the hands knocked off, the propeller being still warm from the fire. At 8:45 p. m. Jack Frost got his work in, and both halves fell away from the shaft and hung by the tackles, and the fair name and fame of a Yankee second engineer was saved.—E. A. Suverkrop, in American Machinist.

NEWLY invented agricultural implements may be imported into Russia without payment of duty.



BUFFALO.

Special Correspondence to the Marine Record.

The total shipment to September 1st, this season, is 1,255,274 tons, as against 1,484,788 tons last season, and 1,241,900 in 1898.

The lumber market is so quiet that there seems little promise of the lake rates being increased until a little later in the season.

Local freights are quoted as follows: Milwaukee, 30 cents; Chicago, 30 cents; Duluth, 30 cents; Toledo, 25 cents; Waukegan, 35 cents; Sheboygan, 30 cents; Fort William, 30 cents; Gladstone, 30 cents.

It is said that the revenue cutters Fessenden and Morrill will be stationed at Buffalo during the Pan-American exposition next year, in order that a strict watch may be kept on all vessels carrying passengers and excursions.

Vessels to move two million bushels of wheat from Duluth to Buffalo during September and October have been placed within the past few days. The rate paid was 2 cents. The coal and ore freight markets show no change. Some chartering is being done, however.

The schooner Reuben Doud, of Detroit, has been libeled by United States Marshal Watts, at this port, as a preliminary action to recover damages by George Watkins and Henry G. Anderson, who allege that owing to a defective center board water entered the hold of the vessel and damaged a cargo of corn valued at \$10,000.

There has been some talk of the Anchor line adding to its passenger service, but Manager Evans says it will not be done now, and he does not think it will pay to build passenger steamers at all. The season is too short. As soon as the price of building material comes down a little more it is likely that there will be some additions to the freight service of the line.

The Pittsburg and Baltimore Coal Co. has received a contract for 75,000 tons of coal to be sent to England by way of Baltimore. The order is the first large one the company has received for export and is the beginning of an active crusade for foreign markets. Pittsburg coal men say that better and larger orders can be obtained if the rail rates to the seaboard are reduced.

Official statement on the commerce of the Great Lakes shows that this season has been remarkably good. Buffalo has handled the great bulk of the grain trade done. Of the 16,743,000 bushels of wheat received at all lake ports, 14,217,441 bushels were consigned to Buffalo, which port also received 23,975,796 bushels of the aggregate of 29,638,915 bushels of corn arriving at all ports. In shipments Duluth leads in wheat and rye, Chicago in corn, and Milwaukee in barley and oats. The volume of trade shows that the railways are not hurting the vesselmen very much.

The gale which struck Buffalo early Wednesday morning reached a velocity of seventy-eight miles an hour. The weather bureau had sent out warning to vesselmen, but the Gladstone and consort, Minneapolis, Wyoming and Hennepin started out. They were driven back after buffeting the waves for several hours. Buffalo's water front suffered comparatively little. The yacht Fleet was almost destroyed, however. The yachtmen disregarded the warnings and left their boats out. Many were driven high and dry and others turned turtle. The stone scows on the breakwater work broke adrift from their moorings and went upon the beach.

Following is the coal distribution by lake so far this season as compiled by the Buffalo correspondent of the Black Diamond: Chicago, 451,980 tons; Milwaukee, 265,510 tons; Duluth-Superior, 259,835 tons; Waukegan, 41,220 tons; Toledo, 36,750 tons; Green Bay, 23,090 tons; Manitowoc, 22,180 tons; Lake Linden, 19,265 tons; Fort William, 17,655 tons; Racine, 13,205 tons; Gladstone, 12,900 tons; Marquette, 10,560 tons; Ashland, 7,350 tons; Hancock, 5,200 tons; Depere, 4,890 tons; Sault, 4,575 tons; Bay City, 4,240 tons; Houghton, 4,050 tons; Portage, 3,475 tons; Kenosha, 3,375 tons; Port Huron, 3,200 tons; Depot Harbor, 2,400 tons; Sheboygan, 2,365 tons; Port Colborne, 1,930 tons; Port Washington, 1,750 tons; Washburn, 1,100 tons; Parry Sound, 1,010 tons; Port Arthur, 940 tons; Menominee, 850 tons; Marinette, 750 tons; Amherstburg, 690 tons; Alpena, 665 tons; Port Clinton, 400 tons; Marine City, 350 tons; Byng Inlet, 325 tons; Port Dover, 240 tons; Port Burwell, 240 tons; Cape Vincent, 105 tons. This is a total of 38 ports, of which seven have appeared during August. The changes are mainly that Milwaukee has passed Duluth and of the minor ports Manitowoc, Depere and Bay City have come up, while Green Bay, and most of the Portage Lake ports, including Ashland, have received very little.

DULUTH-SUPERIOR.

Special Correspondence to The Marine Record.

Vessels to move 2,000,000 bushels of wheat from Duluth to Buffalo during September and October have been placed within the past few days. The rate paid was 2 cents. Of course, this is not a great quantity.

The list of steamers enrolled at the Duluth custom house, has been increased by the addition of the Princeton, 5,125 tons, and the Rensselaer 5,124 tons—both belong to the Pittsburg Steamship Company, the resident managing owner being L. W. Powell, local manager of the Carnegie interests.

The schooner Nordkyn, a sea-going vessel fifty feet in length and twenty-three tons gross measurement, has been enrolled at Duluth. She is owned by Capt. Redmeyer, who lives down on the north shore and who intends to make a trip to Norway in her. She was built in the woods near Grand Marais, Minn., by her owner. She is a fore-and-aft schooner.

A deposit of iron ore, it is reported, has been discovered in the vicinity of Lake Vermillion, about 18 miles west of Tower, Minn., of a quality similar to that produced by the iron mines at Soudan and Ely. The deposit is upon lands belonging to the Duluth & Iron Range railroad, part of the state grant to that road. The discovery has created quite an excitement amongst the settlers in that region and should the deposits prove workable an early development of the property is probable and the homesteaders may find the values of their claims very materially enhanced.

A number of mines on the Mesaba range are flooded and there are washouts on the railroads running to the shipping ports. Some of the flooded mines are in pretty bad condition and it will be at least a week or ten days before they are in shape to ship again. Unless the vessels that are now under charter for ore from the mines that are flooded can get grain they will have a long wait for cargoes. There is no change in the condition of the freight market. The demand for chartering is light and during the last week only a few small carriers were placed. The supply of coal tonnage is about equal to the demand and the rates hold steady all around.

An interest has been started to establish a marine post-office at Sault Ste. Marie. It is claimed that more mail is handled by a few clerks there than at the marine postoffice at Detroit. Owing to the fact that there is no regular station at the "Soo", no postage stamps are sold, and there is no way of mailing registered letters. The Sault Ste. Marie News says a postoffice would be of incalculable convenience to the marine interests, and the statement is pertinent, besides being perfectly correct. There is every reason for a marine postoffice to be established at the "Soo", everything is in favor of such a change being made and not a syllable derogatory to it.

John Coventry, manager for A. Booth & Co., at this point, received word from E. D. Carter, secretary of the company at Chicago, announcing that a contract has been awarded for the construction of the proposed new steamer to ply between Duluth and Port Arthur, to take the place of the Hiram R. Dixon. The statement did not announce at what shipyard the boat will be constructed but it is known that the cost of the ship will be about \$100,000. The plans for the new boat were made by Capt. Joseph Kidd, and he will superintend the construction. The News-Tribune about three weeks ago announced that the company had decided to build this boat, and gave a description of the plans.

The grain rate from Duluth has again got above the rate from Lake Michigan, and why the difference should be so large passes comprehension. The Daily Commercial Record says: No Chicago elevator can offer any quicker dispatch than do the Duluth elevators, and lots of them are not to be mentioned at the same time. Of course the distance to Chicago is a little shorter, 6 to 8 hours, and sometimes coal rates are higher at Lake Michigan; but a boat will often lose the 6 or 8 hours before getting through the second bridge at Chicago, and if she has to go up the river any distance at all, two or three tugs are necessary up and down, with all the chances of knocking out bridges and docks, going up light with a four-mile current and coming down loaded, usually with a part cargo to be completed below, running the chance of being hung up on a tunnel. During the past week three boats have been libeled at Chicago for damaging bridges; other boats have got swung across the channel and all the tugs in the harbor couldn't move them until the current was stopped, which takes 12 to 18 hours. A careful study, extending over two or three years, of this subject of disparity in rates, leads to the conclusion that it is a relic of the time when boats from Chicago could load a foot or a foot and a half deeper than from Duluth, and the difference then was justified. As is well known, the sailor man is a hard-headed chap, who, having once adopted a habit is slow to change, and the vessel brokers here, instead of trying to change him, have found it an easier task to keep the market here up to his views. It is time this order of things was changed, not alone for the benefit of this market, but for the benefit of the vesselmen as well. Every fraction of a cent that brings Duluth's vessel rate down toward Chicago's, opens up more competitive territory for grain to Duluth, and every bushel of grain that comes to Duluth has got to pay tribute to a vessel, but not so at Chicago. Seventy-five per cent. or more of the grain that goes east from Chicago territory goes all rail.

Capt. Peter Jenson, who has been ordered to take charge of the station at Holland, commencing Sept. 6, was for eleven years keeper of the Pentwater station, and is now serving his fourth season at Ludington. He is held in the highest regard by marine men all along the shore.

CLEVELAND.

Special Correspondence to The Marine Record.

Mr. A. B. Wolvin, the well known vessel manager of Duluth, visited this port on Tuesday.

The last day trips between Cleveland and Detroit was made by the D. & C. steamers on Wednesday.

The steamer Oregon, which has been in dry dock for a couple of days for repairs, was released Monday.

The Charles Tower collided with the Iroquois at Asbula this week, but only to the extent of about \$1,100.

The Booth Packing Co. placed this week a contract with the Craig Ship Building Co., at Toledo, for a steel passenger steamer.

The Euclid Beach boats, the Duluth and Superior, were taken to Vermillion this week where they will lay up for the winter, their season to the beach being over.

The coal movement to the head of the lakes has been rather light this week, and from all indications the docks seem to be pretty well piled up. Milwaukee is now the favorite port to charter to.

Steamers still have trouble in some places in the river, especially those that are heavily loaded. The Colonial was on the bottom over an hour Monday near the upper furnace, but was finally released. It has been several weeks since a vessel has grounded at collision bend, and it is believed that the dredging at this point has bettered the stream considerably.

What might be termed echoes of the late gale are being heard from on all sides. The steamer John B. Lyons, owned by Capt. J. C. Gilchrist, of this city, went down off Girard, Pa., and seven members of her crew are reported lost. The schooner Dundee, owned by the Minch Transportation Co., was lost twelve miles off Cleveland, near the scene of the Idler disaster. The cook was drowned. Captain and crew were rescued.

Already there is a movement among the owners of the Welland canal sized steamers to send those vessels to the coast for the winter. There appears to be a good demand for salt water tonnage, and by using them on fresh water during the summer and on salt water the remainder of the year, the owners hope to make up for what would have been their gain if rates had been higher. H. A. Hawgood and W. A. Hawgood are in the east making final arrangements for the Eureka and Tampico to go into the ocean trade.

Last week a block of ore was covered from the upper lake ports to Ohio at 70 cents. It is not believed that this represents the market, the belief being that the former rate of 75 cents still prevails. With ore at less than 75 cents, vessels can find more lucrative employment in other lines of trade, in grain especially. The movement of coal up the lakes continues about as it has been for a week, more cargoes being shipped, but without a change in the rates. The lumber situation is without change, though the situation is a little firmer, if anything.

Capt. R. W. England, master of the steamer V. H. Ketcham, reports that about 9:15 of the morning of Saturday Sept. 8, 1900, when 48½ statute miles E. ¼ N. true from south-east shoal gas buoy, on the passage from Pelee Passage to Ashtabula, he came abreast of a section of a timber crib floating. He estimates that there were about 10 heavy timbers securely fastened with two large upright timbers standing ten feet high. The obstruction was about 20 feet long and seemed heavy enough to sink a vessel in collision. Mariners are warned and requested to report any further information to the nearest branch hydrographic office. The probable drift will be to the westward and southward with the present prevailing winds.

The Iron Trade Review says: Further business from shipyards was placed with Pittsburg the past week—about 6,000 tons. For the boats already booked by the American Ship Building Co., to be delivered next season a total of about 30,000 tons of plates and shapes has been taken, making no insignificant factor in the schedules of the mills. There is yet more talk of vessel building but the yards are comfortably supplied by the 18 vessels already ordered. Structural material, apart from bridge and vessel work, has not been spurred into activity by the cut to 1.50c. for beams and channels and the mills are pressing for business, though, of course, the price is maintained. Attractive quotations are still made, when shapes are asked for in connection with a good tonnage of other material.

As it is more than probable that the question of modification—probably in a very limited way, however—of the navigation rules of the Mary's river will again be brought up at the next annual meeting of the Lake Carriers' Association, Capt. George P. McKay treasurer, and chairman of the Committee on Rules of Aids to Navigation, has decided to secure the views of different interests on the subject. He has begun work by writing Capt. A. B. Davis of the revenue cutter service, telling him there are some vessel masters who are of the opinion that a speed limit is not now really necessary in any part of the river, in view of the well-defined regulation as to vessels meeting and passing one another. Capt. McKay is evidently correct, as, if we go on with these continual restrictions, government officers, the sailors union, or some other people, will be sailing the craft, instead of owners or their agents. I hear that it is nearly time to stop this tomfoolery of letting other people handle your personal interests.

CHICAGO.

Special Correspondence to The Marine Record.

Grain rates remain firm at Saturday's advance to 2c for wheat. For corn the rate ranged between 1¾ to 2c, according to location of cargoes.

Capt. Thorald Hansen, of the schooner J. V. Jones, fell from the dock at Sutton's bay, Monday night, and was drowned. He lived in Milwaukee when at home.

Grain rates were firm at 2 cents on corn and all business done on that basis. Several charters more than were reported were closed, but the names were withheld.

The keel of the new steamer ordered by Capt. C. W. Elphike and associates, is being laid at South Chicago and work will be pushed from this time on. Keels for the Atlantic boats will follow in short order.

The steamer Maricopa and the schooners Manila and Marsala, which were towed by that steamer, brought 22,635 net tons of iron ore to the Illinois Steel Co. at South Chicago on Tuesday. This is the largest tow ever made on the lakes.

From Pittsburg comes the announcement that the iron and steel interests have placed a hurried order for the construction of a fleet of ten big freighters to ply from Lake Erie ports via the Welland canal and the Gulf of St. Lawrence, across the Atlantic. The fleet will cost about \$3,500,000.

Directors of the American Steel & Wire Co. have declared the regular quarterly dividends of 1¾ per cent. each on the common and preferred stocks, payable October 2. Books close September 17 and reopen October 3. An official said that the company had no intention of constructing a Bessemer plant at Waukegan, Ill.

Mr Rockefeller wants some of the profits which the advance in grain freights is bringing. His whaleback modeled craft which have been in idleness for some weeks, are being chartered to take cargoes from Chicago at 1½ cents for corn and 2 cents for wheat. Four or five of them had been placed up to noon on Tuesday.

From every port on the lakes comes word of damage to life and property through the gale which swept over this locality on Tuesday and Wednesday. Hundreds of vessels were held in port on account of the warnings issued by the Weather Bureau, and now that the blow is over I hear nothing but words of praise for this branch of the government service.

Mrs. Ellen Cochrane, widow of Capt. Robert Cochrane, who was one of the pioneers of lake traffic, died at her home in Milwaukee this week, aged 88 years. Five sons and two daughters survive her. One son, Capt. David M. Cochrane, is superintendent of the Goodrich Transportation line. Another son, Capt. John M. Cochrane, is master of the steamer Parks Foster.

The side-wheel steamer City of Milwaukee of the Graham & Morton line between Chicago and St. Joseph will be withdrawn from the route next Saturday and sent to Manitowoc, where a new boiler is to be put in and the woodwork between the main deck and promenade decks renewed. The work will occupy the greater portion of the winter, as there is no hurry about it.

The work of releasing the steamer Parks Foster, grounded nine miles south of Manitowoc, was attended with much difficulty. Sixty men were engaged in throwing the coal cargo overboard. The steamer was in command of Capt. W. E. Morris. Capt. Cochrane being at Milwaukee attending the funeral of his mother. When the wreckers released the steamer on Tuesday, she went along under her own steam to Manitowoc. Two hundred tons coal were jettisoned before the tug Meyer pulled the steamer from the rocks.

Information has been received from the master of the United States light-house tender Marigold, and confirmed by Commander J. C. Wilson, U. S. N., inspector of the eleventh light-house district, of the existence of a rocky shoal to the westward of Stannard Rock light-house, distant about one-half to three-fourths mile, with a least depth of eighteen feet, rocky bottom, which can be plainly seen from vessels passing over it in calm weather. Further information will be published when this danger has been accurately located. Masters of vessels are cautioned in the meanwhile.

Referring to the recent test of speed of the steamer Darius Cole, the Chicago Journal says: "The Cole has admittedly failed to make the time she was advertised to make, and the officials of the Williams line confess that if the day run between Chicago and South Haven is to be made a success they must have faster boats. What surprises marine men most is the fact that every captain engaged in general lake trade knew that the Cole could not make 15 miles an hour when running on the Detroit and St. Clair rivers. Whatever may be the result of the threatened suit over the Darius Cole, the Williams line will have another and faster steamer next season, one which will make 17 or 18 miles an hour in the water as well as on paper."

No credence is given here to a story this week from Pittsburg that the big steel combinations are building ships to carry their products to salt water. On the contrary, the fact is that the steel companies are not increasing their fleets at all. The new ships are being built by individual vesselmen, and this has attracted marked attention, as showing a disposition to let the carrying trade pass back to individual enterprise, except for the boats already owned by the combinations. There is, however, much curiosity as to what the

Lackawanna Iron & Steel Co. is going to do for lake tonnage as soon as its great plant near Buffalo begins operations. It was thought the boats being built by J. C. Gilchrist, of Cleveland, were really for that company, but this he has denied, or rather there never was occasion for denial among those best informed. Gilchrist, like Wolvin, is acting for others, as scores have done before. So far as known, the Lackawanna company will not have a boat of its own, but will charter outsiders to carry its iron ore from the mines.

DETROIT.

Special Correspondence to the Marine Record.

Unless travel warrants keeping the steamer Tashmoo in commission longer, she will be laid up for the season about the latter part of next week.

The wreck of the steamer Fontana is said to be settling rapidly in the channel near the Fort Gratiot light, and in a few days nothing will be seen above the water.

It has been found necessary to saw off several piles in the Military street bridge, at Port Huron, in order to let the new steamer Thomas A. Wilson pass through the draw.

The steamer Monohansett is unloading her cargo of coal at Mullen's dock, after which she will be drydocked for repairs caused by being run into by an unknown steamer early in the week.

The Detroit Ship Building Co. has work contracted for to the full capacity of the works from the present time until May 1. The company has just booked an order for a 1,200 horse-power triple-expansion engine, which must be completed within 100 days and on its way to Seattle.

The steamer J. W. Moore was seized in midstream off Amherstburg last week by Deputy Sheriff Rumbal, of Sandwich, on action taken by the owners of the schooner J. S. Richards to recover damages for the sinking of the schooner in the Detroit river off Walkerville on the morning of August 1. With the deputy on board, the Moore proceeded out in the lake as far as Bar Point, where she was anchored. Capt. Neville returned and secured bonds in the sum of \$23,000, the full amount of the damage to the Richards.

The steamer Monohansett is here for repairs. While going up the river, she was struck on the port bow by a down-bound steamer whose name is unknown, off the lower end of Grosse Isle. Capt. C. M. Ennis, not being aware that his vessel had been damaged, proceeded on his trip without stopping. When in Lake St. Clair, the Monohansett began to behave badly, and an investigation showed 4 feet of water in her hold. Capt. Ennis at once started the pumps and returned to Detroit. The boat's cargo will not have to be removed in order to make repairs, but the damage done by the collision is considered serious.

John S. Newberry has purchased, on the Atlantic coast, and will bring to the Detroit river for use as a pleasure craft, a vessel which has covered a mile of water in the remarkable time of one second less than two minutes. Mr. Newberry bought the boat from a Brooklyn man and gave the fast launch Dawn in part payment for her. The new boat is named the Presto. Its record made in a trial on Saturday over a measured mile is 1 minute 59 seconds, which is a speed of about thirty miles an hour. Mr. Newberry is now in the east preparing for the cruise home. The boat will appear in the Detroit river before the end of the yachting season.

Vessel agents say if there is not an improvement in lumber rates there is likely to be a number of boats tied up. Owners are getting tired of doing business for fun, and paying all the earnings of their boats to the stevedores and the coal trust. At present they must pay 60 cents an hour for loading and anywhere from 55 to 60 cents for unloading. This, taken with the higher prices of fuel, knocks off all the profits. Coal is \$1 a ton higher than it was last year. Vessels are paying \$2.80 a ton for fuel. The lumber rate at present is firm and there is some inquiry for tonnage from the upper Lake Huron region, but it is not sufficient to warrant any hopes of profit, although it is stronger than it was two weeks ago.

Capt. J. B. Moore, formerly in charge of the revenue cutter Fessenden, but late of the Winona, stationed at Mobile, Ala., has again taken command of his old boat, Lieut. B. L. Reed, who has been in command of the vessel, giving way to his senior officer. Capt. Moore has been in the revenue service for more than 35 years, having received his first commission in 1865. He was made a captain by President Arthur in 1884, while serving on the Pacific coast. He has seen all there is to be seen in the revenue service on the coast, and that embraces a wide field. Coming to this port and in charge of the Fessenden, the change will be one something akin to a summer vacation as compared with the duties elsewhere. Capt. Moore's many friends on the lakes will welcome him back. Capt. Moore succeeds Capt. Hodgson, who was retired on full pay some months ago because of his services when in command of the McCulloch in Manila Bay.

When the big steamer William Edenborn was launched June 20 at the yards of the West Bay City Ship Building Co., the ceremony of christening the boat was performed by Mrs. F. A. Goodwin, who broke a bottle of wine over the bow of the craft as she slid into the water. The owners of the Edenborn, the American Steel & Wire Co., of Cleveland, secured the neck of the bottle and had it artistically mounted in silver as a candlestick, sending it to Mrs. Goodwin a

day or two ago. The memento is of handsome design and bears the inscription: "Steamer William Edenborn, launched June 20, 1900. Christened by Mrs. F. A. Goodwin." The present is highly prized by Mrs. Goodwin and is awarded a place of honor in her apartments in the Fraser at Bay City.

Next Saturday the Howard L. Shaw will be launched from the Wyandotte yards of the Detroit Ship Building Co. She is a sister ship to the recently completed steel steamer Simon J. Murphy, and is 446 feet in length over all, 51 feet 6 inches beam, with a molded depth of 28 feet 6 inches. She will be propelled by triple-expansion engines and Scotch type boilers, fitted with Howden's hot draught. The Shaw will be provided with a limited passenger license, and will be fitted with three spare staterooms, with double and single berths in each, with a large sitting room. This special provision is for the benefit of the owner and his friends, should they desire to take a lake trip on a freighter, as seems to be the rage nowadays. She has also an electric light plant, a searchlight, and the usual warping engines on her deck, such as are put on all first-class freighters. She carries a stern anchor for use in emergency in rivers. As the new boat is a duplicate of the Simon J. Murphy, it is expected she will do what the Murphy does, namely, carry 6,881 tons of ore on a mean draft of 18 feet, and run 12 miles an hour on a consumption of 2,300 pounds of coal an hour.

KINGSTON, ONT.

Special Correspondence to The Marine Record.

The steamer India and consort Ceylon arrived today at Garden Island with ore from Lake Superior ports.

The steamer New York made her last trip on the river Wednesday, and laid up last night. Capt. Andy Miller is grieved at having to leave the water so soon.

Prof. Millen, of the School of Mining of Queens College is engaged on geological work for the Provincial Government and in connection with the Sudbury district.

Capt. Drake, Buffalo, Chief Inspector for Inland Lloyds for the United States, will meet Capt. Donnelly, the Canadian chief inspector, at Kingston next week, when some changes will be made in the company's rules affecting insurance.

Dockmaster Rees, of the government graving dock, states that the report that the present season has been a dull one at the dock, is erroneous. The season is one of the best the dock has enjoyed; July and August are record months in the history of the place.

The steamer Hecla, from Charlotte to Ogdensburg with coal, struck a rocky shoal at St. Helena Island, in the St. Lawrence river. The weather was very thick at the time. The steamer was badly damaged, and was taken to the St. Lawrence shipyard for repairs.

The grain barge Alice, from Ogdensburg to Montreal, struck in the new channel near Cardinal, and was towed back, when it was found that she had 2,600 bushels of wet grain. The grain is part of the cargo of the steamer W. P. Ketcham, and was shipped by Richardson & Co., of Chicago.

Senator Forget, president of the R. & O. N. Co., accompanied by Mr. C. F. Gildersleeve, manager, and Gilbert Johnston, chief engineer, stopped in the city Wednesday en route to Toronto to inspect the new steamer Kingston. It is the desire of the company to have the Kingston in commission for the Pan-American Exposition next summer.

Surveyor Germaine, in the employment of the Grand Trunk Railway Co., was in the city yesterday and made a survey of the Grand Trunk level crossing on lower Montreal street; also the dangerous crossing at Collins Bay. He left today to make a survey of the crossing at Rideau station and will report and recommend that those dangerous spots be fixed so as to render them safe.

The Donnelly Wrecking & Salvage Co. made a record in lifting the schooner Volunteer, sunk in the river at Belleville. The Volunteer struck the bridge and sank, having 400 tons of stone aboard, 125 tons being on the deck. When she settled on the bottom there were six feet of water above her deck. The steamer Donnelly and a wrecking crew, in charge of John Donnelly, left Kingston Sunday, getting to work on the schooner Monday. By two o'clock Tuesday morning the Volunteer was afloat. Her damages were temporarily repaired, but sufficiently so to allow her to proceed on her voyage to Toronto. All the requisite diving was performed by William Newman.

An important contract has about been given out by the Department of Railways and Canals. Some time ago the Government invited tenders for the construction of what is known as the Hillsboro Bridge, near Charlottetown, P. E. I., a structure about three quarters of a mile in length, and intended to unite the main line with a branch of the Prince Edward Island railway system now being built by a local contractor. Tenders were to be in by the 10th of last month, and as the work in question will embrace an outlay of well on to a million dollars, the greatest interest was manifest amongst the contracting fraternity. It is understood, however, that Mr. M. J. Haney, is the lowest tenderer, and that this gentleman will sign the contract immediately if he has not already done so. It will be remembered that Mr. Haney was engaged with the late Mr. Ryan in building the Canadian "Soo" canal, and that he also acted as superintendent of construction of the Crow's Nest Pass section of the Canadian Pacific Railway. The amount of the successful tender has not yet been given out.

INDUSTRIES AT THE "SOO."

A long and interesting account of the industrial development in progress at Sault Ste. Marie, written by D. E. Woodbridge, appears in Iron Ore, from which the following extracts are taken:

This development is based on two axiomatic propositions: 1, that the day of large and assured profits in competitive industries is declining and that such profits must be made from original processes, which processes will be to a certain extent monopolistic, using that word in its best sense; and 2, that to be successful in the broadest way, industrial development must utilize only such materials, ingredients and methods as, being natural to the locality, can be cheaply assembled at the point of manufacture, and must utilize all of them, disregarding no by-product of commercial value that can without too great cost be made productive. This is, in brief, the situation as to the nine or ten associated companies located at the Sault Ste. Marie, Ont., that are now developing and utilizing the vast power of Lake Superior, under the leadership of Francis H. Clergue.

At present the product of these companies is limited to paper pulp, one of the largest mills in the world being steadily at work, and to iron ore from a mine just opened. But there are under construction what will be the largest chemical pulp mill in existence; works for the production from nickeliferous pyrrhotite of sulphurous and sulphuric acid, sulphite liquor and sulphurous anhydride, works for the reduction of the roasted cinder, which is a by-product of this pyrrhotite, into a nickel steel or ferro nickel alloy of value in the arts, and a large electrolytic plant for the production of caustic soda and bleaching powder is about going in operation. Works planned and to be erected as rapidly as possible include blast furnaces to treat hematite iron ore from the company's new Helen mine on the northeast coast of Lake Superior, and a rail mill to roll daily 1,000 tons of nickel steel rails, etc.

For the immediate present the power used amounts to about 20,000 horse power, but the company are constructing on the Michigan side of the Sault river a canal to furnish 50,000 horse power. Two weeks ago the first earth was turned for a third canal, to be used on the Canadian side and to develop 40,000 horse power. The total of these three canals will give this one company the enormous power of 110,000 horse power, with Lake Superior for a mill pond, and they will utilize most, if not all, of the water now running to waste down the rapids of St. Marie.

The enterprise is the direct result of failure. When the company five years ago had completed their 20,000 horse power canal they were ready to sell power to manufacturers, but to their surprise no manufacturers seemed desirous of buying. A pulp mill to turn out 100 tons a day of ground wood pulp was erected. Wood pulp was then shipped wet to the paper factory, and there was the added cost of freight of 55 per cent. of water and the loss by the straining of pulp by the decomposition of rosin in pulp fiber. The company then invented and installed a drying attachment, and have since then reached a position where they are a great factor in the price of paper pulp in the western United States and in Canada. At present the product of this mill is worth about \$900,000 per year.

But chemical pulp, treated with sulphur, is worth nearly double mechanical or ground pulp, and the company decided to erect a 100-ton sulphite mill. There was no adequate source of sulphur nearer than those that would cost, delivered at Sault Ste. Marie, from \$25 to \$35 a ton. A hundred miles east of the Sault there are the extensive copper and nickel deposits of Sudbury, which is the world's chief nickel producer. There the Canadian Copper Company were making a nickel matte and belching forth from furnaces vast volumes daily of sulphuric acid gas. Mr. Clergue bought a nickel mine for the sulphur. To this mine and on to Georgian Bay his company are now building the Manitoulin & North Shore railway, to develop their own and other nickel deposits of great extent. By a novel and original roasting process they claim to have been able to extract the last atom of sulphur from its ore, leaving a ferro-nickel ore. The construction of the sulphite pulp mill is now well advanced and it will this winter present many new processes in manufacture.

With the ferro-nickel ore left after the elimination of the sulphur the company set about its utilization. Furnaces were devised that, to the extent of a 5-ton unit, smelted this soft, high nickel material with a sufficient mixture of anhydrous sesquioxide of iron to make a hard nickel steel by the use of electricity as the smelting agent. All tools

that require hardness in the company's large and well-equipped machine shops are actually manufactured there from nickel steel reduced from the ore in their own 5-ton experimental furnaces. The company consider it settled that they can produce this alloy in large quantities at low price and are now proceeding on this theory in the widening of their industrial operations. They are preparing to erect furnaces to make 250 tons daily, which are stated by them to be under a contract to supply the Krupp furnaces at Essen, Germany.

In the summer of 1897, a prospector searching for gold in the Michipicoten country, 125 miles north of the Sault, found an outcropping of hard hematite. He did not know its value or extent, had no funds with which to explore and offered his discovery to Mr. Clergue for \$500. An investigation proved satisfactory, and the money was paid. This ore gives the necessary ingredient for reducing the surplus nickel of the alloy and opening a tempting field for the miner. July 12 this year the first cars of ore were hauled down over a line laid with 85 pound steel, upon a dock and into ships bought by the company in England a few weeks before. This ore deposit is not, it would appear, an isolated out-cropping, for the company has traced the ore-bearing formation in the Huronian for sixty miles and have located several other ore bodies therein, none of which have been more than cursorily examined. One of these, ten miles from the Helen mine, shows a deposit of fine hematite of unknown extent. It is the opinion of the company that a sixth great ore range of Lake Superior has been found here, and they are proceeding on this theory in their search for mineral and in locating their land grants.

Within the past three weeks the Ontario government has granted the company a princely area, 1,650,000 acres in fee, including all mineral and timber rights, and to be selected within reasonable distance of their roads. One hundred and fifty expert mineralogists, geologists and woodsmen, each party of two men assisted by two Indians and equipped completely, are now in the forests included in this grant of seventy-one townships, verifying and correcting previous information from all sources, locating bodies of timber and favorable mineral bearing lands and tracing the contacts of the formations lying along the northeast coast of Lake Superior.

With the discovery of the iron mine and the beginning of its development into an important property it was evident that mining operations more extensive than its use as a mixture for ferro-nickel would allow should be undertaken, and the blast furnace proposition was attacked. Plans have been received from prominent engineers for furnaces of a capacity to furnish metal for a 1000-ton rail mill, and they are intended to be erected within the next year. Subsequently a rail mill to roll rails of their nickel steel alloy is, it is stated, to be added. In connection with their blast furnace proposition, the company have been experimenting along lines of startling interest, and if they are as successful in large practice as they believe they have been in small experiments, will develop a process that, to say the least, is revolutionary. The plans for the ferro-nickel works propose one hundred furnaces of a daily capacity of five tons each.

These three canals will take a very large share of the flow of Lake Superior, leaving little or no water for the rapids. These are destined to become a mere rivulet, or a dry channel.

Finding it unsatisfactory to secure elsewhere the machinery and tools required for many of their processes, the company built a large machine shop, where they have erected all possible parts of their equipment. They have just completed and are now moving into an addition to this shop, 100x180 feet and two stories high, equipped with new tools throughout from the best makers in America. There are ten lines of tools, each 180 feet long, driven by shafting from a central dynamo, the company considering this method better adapted to their purposes than separate motor driving. The entire shop employs about 250 men, and very little outside work is done there. A fifty foot traveling crane is provided, and a track of the company's railway, Algoma Central, runs through the building. A patent by one of their foremen is in use at all lathes by which metal is turned to a section of any desired shape.

The railway projects of the company are aided by the Ontario government, and besides their land grant they have within the past month received cash subsidies from the Dominion government of \$360,000. The Algoma Central has ten miles railed and ten more ready for steel, northerly

from the Sault, and will reach a point 150 miles north next year. It is chartered and subsidized to Hudson Bay, 500 miles north, and by the very recent purchase of the charter of the Hudson Bay & Sault Ste. Marie road it comes into line for an additional land grant of 1,250,000 acres and \$500,000. This will be earned later. "We shall be running through trains to Hudson Bay and carrying fish into Chicago from there inside of five years," said Mr. Clergue, when speaking of his part of the enterprise.

The various companies under the control of F. H. Clergue and his brothers, E. V. and B. J., have so far spent between four and five million dollars, and their daily pay roll is more than \$5,000. The projects they have in hand will cost \$20,000,000.

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co., New York, report the condition of the Eastern freight market as follows:

In consequence of specially brisk enquiry for prompt tonnage from the Atlantic cotton ports (the crop having matured beyond expectation under hot forcing weather) our freight market has shown a good deal of excitement in the early part of the week and owners have been enabled to place a number of boats at highly satisfactory rates, both thence and from the Gulf. Berth freights for grain and general cargo having recently undergone quite an advance under an improved demand, rates for full cargoes have likewise changed for the better and may be quoted at 3s. 9d. to 3s. 10½d. for large vessels to picked ports, 4s. 7½d. to Cork f. o. A number of further fixtures have been effected for coal and there is still a considerable enquiry unsatisfied in consequence of the advancing tendency of freights for this business. At the time of writing the pressing enquiry for tonnage has somewhat abated and whilst steamers continue offering freely, charterers, especially in the cotton ports, appear inclined to assume a waiting attitude. A revival of brisk enquiry after the establishment of a somewhat lower level of freight may, however, take place again at any moment.

There is no change whatever in the condition of our market for sailing vessels, which continues hampered in its movement by the protracted scarcity of available tonnage and the consequently advanced demand of owners.

"TOM PUDDINGS."

The changes and improvements during the last few years in the means of transporting goods and minerals from the outports inland, and from inland to outports, are various and numerous. It is not so many years since the barges on our canals were drawn to their destinations by decrepit, starved and wretched looking horses. Now the system is entirely altered. Steam tow-boats have taken their place, each steam tow-boat drawing ten or twenty fully-laden barges. Even this system has been improved upon by the introduction of square, iron tanks, not barges, each carrying about forty tons, coals or minerals, the steam tow-boat drawing about twenty of these, now called "Tom Puddings," from the mines to the docks at Goole, etc. Such is the rapid progress made in this method of transporting coals, minerals, etc., owing to the enormous reduction in the cost of transport, that it bids fair to monopolize a large portion of railway traffic, and to encourage further developments in the transport of not only coals and minerals, but manufactured goods, to the ships and steamers in our docks, as well as to the continental and Mediterranean ports, returning to the United Kingdom fully laden with produce. No doubt this idea has been copied from America, where a similar system has been in operation throughout all the waterways of the States. In connection with these "Tom Puddings" a towing machine has been invented to fix on the deck of the tug which renders it impossible for the tow-line to snap or break. It is so constructed that in case of a great strain the machine pays out slowly the wire rope attached to the barges, automatically, and when the strain is eased the machine winds up the length paid out automatically to its original length. These machines play an important part on the waterways and lakes of the United States. There can be no possibility of accident when they are used in towing. Mr. C. E. Solely, of 19 Castle street, in this city, is the sole agent for the manufacturers of this machine, of which there are five or six sizes, capable of towing 3,000 to 15,000 tons. The steam tug companies here are beginning to use them, and, no doubt, in a short time they will be generally adopted.—Liverpool Journal of Commerce.

CROSSING THE ATLANTIC.

Some interest may be evinced by our readers in being made acquainted with the time of passages across the Atlantic. Our contemporary the Syren and Shipping, of London, so places the record of time and distance:

Year.	Name of Vessel.	Line.	From	To	Average Speed.	Time from Port to Port, assumed distance 3,070 K.
1885	Etruria	Cunard	Liverpool	New York	19	6 days 17 hours 34 mins.
1887	Umbria	Cunard	Liverpool	New York	19 1/4	6 days 15 hours 28 mins.
1887	Etruria	Cunard	New York	Liverpool	19 1/2	6 days 13 hours 26 mins.
1888	Etruria	Cunard	Liverpool	New York	19 1/2	6 days 13 hours 26 mins.
1889	City of Paris	Inman	Liverpool	New York	20	6 days 9 hours 30 mins.
1891	Teutonic	White Star	Liverpool	New York	20 1/2	6 days 5 hours 45 mins.
1892	City of Paris	Inman	Liverpool	New York	20.7	6 days 4 hours 18 mins.
1893	Lucania	Cunard	Liverpool	New York	21	6 days 2 hours 11 mins.
1894	Lucania	Cunard	Liverpool	New York	21.81	5 days 20 hours 45 mins.
1898	Kaiser Wilhelm	North German	Southampton	New York	22.29	5 days 17 hours 43 mins.
1899	der Grosse	Lloyd	Southampton	New York	22.86	5 days 14 hours 17 mins.
1900	Oceanic	White Star	Liverpool	New York	20.72	6 days 4 hours 9 mins.
1900	Deutschland	Ham.-Amer.	Southampton	New York	23.32	5 days 11 hours 38 mins.

We have compiled the table from the average speeds on the fastest runs of these record-breakers, and in the last column we show the time in which the voyage would be completed, assuming the distance to be 3,070 nautical miles from port to port, without any stops. We have not given the records as usually published, because they are taken from point to point, not port to port, and the times are consequently very confusing. It will be seen from the table that the passages of the Cunard and White Star liners work out at about six to six and a quarter days, or a little more, which includes the time taken up by the call at Queenstown; the German "cracks" occupy from five and a half to five and three quarter days. It will also be noticed that the reductions in the duration of the passages have been brought down by stages of from two to five hours at a time, therefore, we may take it that approximately three hours is the maximum reduction in the passage made by each vessel as it comes into the competition. The Oceanic, although she has the distinction of being the largest vessel afloat, and is the fastest of the White Star liners, has never broken the Atlantic record. As everybody now knows, she was not built to beat the record for speed; the owners very rightly decided to pay more attention to comfort and safety rather than to adding an extra knot or two to her steaming power, which would be to no purpose either from the standpoint of expediency or utility.

N. B.—The "Inman" line is n w the "American" line.

SINECURE BILLETS.

FORECASTS AND WARNINGS.

By Prof. E. B. Garriott, in charge of Forecast Division, U. S. Weather Bureau.

No severe storms of a general character occurred in the United States or the West Indies during June, 1900. The weather continued very dry in the Northwestern States, and the Upper Mississippi river reached the lowest June stage noted in many years.

The local rains of the month were, as a rule, forecast.

CHICAGO FORECAST DISTRICT.—No special warnings of storms were issued. The daily forecasts, however, were of great value, especially on account of the critical condition of the spring wheat in the Northwest. The showers which occurred in that section were generally forecast.—H. J. Cox, Professor.

SAN FRANCISCO FORECAST DISTRICT.—The month has been, as a whole, uneventful. There were no serious northers.—Alexander G. McAdie, Forecast Official.

PORTLAND ORE. FORECAST DISTRICT.—The month was free from all unusual atmospheric disturbances, and no frost or storm warnings were issued.—Edward A. Beals, Forecast Official.

HAVANA FORECAST DISTRICT.—No disturbances occurred during the month, and no special warnings were issued.—William B. Stockman, Forecast Official.

THE Carnegie Steel Company has taken a contract to supply the Russian government with 1,000 tons of armor plate at \$560 per ton. The delivery must be made within a period of 14 months. This plate is to go on ships of the Russian Navy to displace old compound armor on the vital parts, which no longer meets the requirements of modern war ordnance. The requisition includes turret and side armor of the newest Kruppized product. The plates will range from 4 to 11 inches in thickness.

KNOWLEDGE VS. MORE KNOWLEDGE.

A caller at the office today was speaking of a certain mechanical engineer and remarked that what he knew about mechanical engineering would fill a very small book, and what he didn't know a very large volume. Ain't this so

with the best of us? The man "who knows it all" is a very sad type. How little of the learning of today survives and becomes the mental furniture of the future. Go back thirty years and you find the world without the telephone, without the electric light. What fields of temporary day by day knowledge these radical discoveries have swept away, and how little the mechanical engineer of to-day would know and what a poor figure he would cut were he only equipped with the knowledge current thirty years ago. The world has only begun to open the book of mechanical science and engineering. We are not yet out of the preface or introduction to the infinite volume. The future will see all our dwellings cooled in summer as we now warm them in winter. Man will yet govern the weather and have it under his command. The average mental power of the masses has increased indefinitely during the century, and is to increase in the future in a more marked ratio. What we know about anything is very small and the future is big with promise.—Graphite, Jersey City, N. J.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo.....	2,950,000	148,000	255,000	53,000	32,000
Chicago.....	12,318,000	870,000	2,979,000	371,000	17,000
Detroit.....	322,000	63,000	107,000	73,000	4,000
Duluth.....	6,505,000	236,000	50,000	47,000	116,000
Fort William, Ont..	1,110,000	.....	.....	.....	.....
Milwaukee.....	780,000	151,000	150,000	7,000	.....
Port Arthur, Ont....	87,000	.....	.....	.....	.....
Toledo.....	1,376,000	357,000	1,401,000	35,000	7,000
Toronto.....	25,000	.....	.....	.....	.....
On Canals.....	33,000	232,000	71,000	.....	.....
On Lakes.....	1,215,000	1,215,000	718,000	45,000	41,000
On Miss. River.....	.....	.....	.....	.....	.....
Grand Total.....	51,735,000	5,357,000	8,825,000	831,000	457,000
Corresponding Date, 1899.....	36,117,000	7,617,000	5,661,000	597,000	618,000
Increase.....	1,441,000	44,000	.....	62,000	.....
Decrease.....	.....	.....	428,000	.....	92,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

EXAMINATION FOR POSITION OF MECHANICAL DRAFTSMAN.

The United States Civil Service Commission announces that on September 25, 26, 27, an examination will be held in any city in the United States where it has a local board of examiners for the position of mechanical draftsman, with expert knowledge of design and construction of hydraulic dredges.

Applicants must furnish prima facie evidence of practical experience in the design and construction of hydraulic dredges before they will be permitted to enter the examination. Age limit, twenty years or over.

Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application forms 304 and 375, which should be properly executed and promptly filed with the commission.

THE Imperial Japanese Society for Saving Life from Shipwreck—Dainippon Teikaku Suinam Kiusai Kwai—has seventeen stations on the coast of Japan fully provided with lifeboats and life-saving apparatus, the boats being manned by volunteer crews. The society was established in 1870, but was not incorporated by Imperial charter until last year

NOTES.

THE Bethlehem Steel Co., Chicago, Ill., Sept. 7, 1900., advises that the title of Mr. H. F. J. Porter's address has been changed to "The Development of the Forgemans Art."

AN order of 4,000 tons of steel rails has been placed by the cape government with the Carnegie Steel Company, of Pittsburg, Pa. This is said to be the first order for rails that has been received in the United States from South Africa since the commencement of the war.

IN Antigonish county, Nova Scotia, there has been discovered a ridge of hematite iron, nine miles long, 1,000 feet high with an average width of 98 feet, containing about 50 per cent metallic iron. The estimated amount of ore thus discovered is 450,000,000 tons. The cost of mining will be slight and the distance from the straits of Northumberland is about two miles.

A BREMEN cable says American pig iron has gained a decided foothold in the German markets, and it only depends on the quality sent over to decide German buyers in taking it to the exclusion of English products. The price has diminished British trade immensely. Alabama pig iron No. 3 was offered at \$16.25 (charges inclusive of freight to Bremen). This is \$2.50 below the price of English Middlesborough No. 3.

EXPORTS of coal from the United States during the year 1900 are likely to reach \$20,000,000 in value, against \$10,000,000 in 1896 and \$6,000,000 in 1890. The figures of the Treasury Bureau of Statistics show that in the seven months ending with July, 1898, the exports of coal from the United States were 2,375, 451 tons; in the same month of 1899 they were 3,006,082 tons, and in the corresponding months of 1900 they were 4,601,755 tons.

THE Trinity House Brethren, who control the light-houses of Great Britain, have granted permission for the installation of Marconi's wireless telegraphic system between the lighthouse at the Mumbles and the mainland of Ilfracombe on the west coast of Devonshire. The pole for carrying the high wire at Ilfracombe is 116 feet 3 inches in height; measures 1 foot 5 inches in diameter at the base, tapering to 3 1/2 inches at the top; and weighs nearly two tons. The pole, which is the largest in the country, has been placed at a depth of 6 feet in the solid rock

THE special commission recently appointed to ascertain the capabilities of the German ship building establishments has made its report to the Imperial naval authorities. The commission point out that besides merchant vessels German yards had 38 warships for Germany and foreign countries on the slips in 1899. The rapid growth of the industry is seen from the fact that 32 new slips are in course of construction or projected, which is nearly 50 per cent. of existing slips. On the Baltic, where German ship building industry is chiefly situated, there are 21 slips of above 500 ft. in length. Germany now has 27 floating docks, against 17 in 1890 and 9 in 1880. The number of workmen now employed in the German yards is about 35,000.

THE Bethlehem Steel Co., South Bethlehem, Penn., received, on Sept. 1st, a telegraphic order for a port propeller shaft to replace the one which broke in Plant Line S. S. La Grande Duchesse, while off Halifax recently. The owners of the vessel specified that the shaft should be made of fluid-compressed open-hearth steel, forged under hydraulic pressure, annealed and rough-turned, and the order was booked for shipment Sept. 11th. The shaft measured 32 feet over all by 13 1/4 inches diameter, and the shipping weight was 15,458 lbs. It was taken in hand under emergency instructions, and went forward Sept. 6th, five days in advance of requirements.

THE Japanese have gone into the ship building business. Five years ago they were novices, to-day there are 13,000 tons of steamships building in Japanese ship yards for European houses. This is progress without a comma. It is stirring up interest in Europe, where for so long the art of shipbuilding was supposed to be a monopoly. A merchant steamship of 11,600 tons displacement was recently launched in the land of the Mikado. Not one half the tonnage is building in British yards for Japan that were under course of construction a few years ago, and it is likely to be less as time moves on. This is saying a great deal for the enterprise and mechanical skill of the Japs, and if so strongly marked in this line, why not in others? A new world is being evolutionized in the Far East, and the time is not far distant when the rest of the world will discover that the yellow-skinned races will have a prominent part to play in shaping the industrial destinies of other races besides their own.—The Age of Steel, St. Louis, Mo.



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CLEVELAND, O., SEPTEMBER 13, 1900.

LAKE COMMERCE.

The commerce of the Great Lakes is making its highest record in the year 1900. Not only is the business carried on the lakes greater during the present season than on any other occasion, but for the first time its details are being accurately ascertained, and the facts presented from month to month to those interested.

The very rapid growth in the commerce of the Great Lakes which has been measured only at one or two points, and that in a fragmentary way, has for many years suggested the importance of some method by which the details of this enormous commerce could be determined, and the shipments to and from each of the great ports of the lakes recorded. For several years the War Department official at the Sault Ste. Marie canal has made an accurate record of the shipments through that passageway which connects Lake Superior with the lower lakes, and statements have been made monthly of the tonnage of vessels passing that point.

But aside from this no definite information has been had regarding the commerce of the lakes as a whole, or of the business of the various ports in the various articles entering into the business of that great highway of commerce, which connects the producing with the manufacturing and consuming sections of our country. In 1899 the matter was seriously taken up by the bureau of statistics of the Treasury department, and a system devised by which this information could be obtained, showing the receipts and shipments of every port in all of the important articles entering into the commerce of the lakes, and at the beginning of the present season this system was put into operation and is proving effective and satisfactory to all interests.

The statistics just compiled, and which form a part of the July summary of commerce and finance, show that during the month of July 5,385 vessels arrived at the 37 principal ports on the Great Lakes, and from the opening of navigation up to August 1 the total number of arrivals was 15,941. The proportion of the water transportation interests of some of the cities on the Great Lakes is also strikingly illustrated. For instance, there entered the port of Chicago during the month of July, 1,108 vessels, or an average of 36 vessels per day. From the opening of navigation in April to August 1 the vessel arrivals at Chicago aggregated 3,518. In the July record Cleveland ranked next to Chicago, there having been 533 arrivals during the interim, but for the season to date both Milwaukee and Buffalo outclass Cleveland, the total arrivals at Milwaukee being 1,599 and at Buffalo 1,355, as compared with 1,336 arrivals at Cleveland. The port of De

troit was entered by 275 vessels during July, and there were 944 arrivals at Duluth, Minn., and 439 at West Superior, Wis., her sister city at the head of the lakes.

There has been considerable discussion of late of the report that the railroads were taking from the lake carriers a greater proportion of northwestern grain shipments than ever before. It would appear, however, from the latest statistics that the inroads are less serious than supposed. The receipts of breadstuffs at the principal ports on the lakes are as follows:

Articles.	July, 1900, bushels.	Season, 1900 to August 1st, bushels.
Wheat.....	1,184,073	16,743,620
Flour (tons).....	25,528	333,612
Corn.....	11,043,583	29,638,915
Oats.....	4,116,455	16,040,389
Barley.....	239,523	2,387,423
Rye.....	78,425	946,156

The statement just compiled also refutes the argument that the water transportation of grain in the Great Lakes district constitutes almost exclusively a direct traffic between Chicago and Buffalo. In the shipment of flour the ports of Duluth and Milwaukee are practically equal, the shipments at each port thus far this season having exceeded 100,000 tons. In shipments of wheat Duluth is far ahead of all other ports, having shipped 1,014,193 bushels in July and 8,268,886 bushels during the season up to August 1. The neighboring port of West Superior, Wis., stands next to Duluth, having shipped 1,911,649 bushels during July and 5,239,051 during the season. Chicago heads the list in corn shipments, her total for July being 6,533,526 bushels and for the season 24,421,335 bushels. In shipments of barley and oats, Milwaukee leads, while in shipments of rye Duluth holds first rank. Although originating at numerous different ports, the great bulk of the lake grain trade converges at Buffalo as a point of discharge. For instance, of the 16,743,000 bushels of wheat received at all lake ports, 14,217,441 bushels were consigned to Buffalo, which port also received 23,975,796 bushels of the aggregate of 29,638,915 bushels of corn arriving at all ports. The iron ore traffic is a branch of lake traffic in which the greatest interest is felt this year by all persons connected with the iron and steel industry. Thus far this season the total receipts of iron ore foot up 7,890,069 tons, 1,869,721 tons being received at Ashtabula, 1,422,327 tons at Cleveland and 1,154,465 tons at South Chicago during the season, while the principal ports of shipment were Two Harbors, with 1,770,846 tons and Duluth with 1,690,935 tons.

THE new floating steel drydock for Algiers, La., is making rapid progress toward completion at Sparrow Point, Md., and will soon be ready for use. It is the largest drydock ever designed, and has a capacity of 18,000 tons, a margin of 4,000 over the heaviest battleships in our navy. A dock of the same type designed for the British Admiralty has a capacity of 17,000 tons. The extra capacity of the Algiers dock is obtained by making the side walls several feet higher than was at first intended. The dock is being constructed in sections, and will consist mainly of pontoons. Three pontoons will compose the floor, and two more will form the side walls. The length of the structure when put together will be 525 feet, with a breadth of 100 feet between the side walls. A ship drawing twenty-eight feet can be easily taken out of the water, and at a pinch the dock can accommodate a vessel drawing thirty feet. Preparations are now being made at Algiers for the installation of the dock. New workshops and boiler houses are being constructed on land, and the naval plant is being improved in other ways. The dock, however, will be entirely independent of any shore attachments or equipments. It will carry its own pumping, elevating and other machinery, and can be moved about from place to place at will. In case of emergency it can be towed to Havana, Key West, or to any other point desired.

THE Weather Bureau, also the officers in charge of lake stations, gave full and ample warning of Tuesday night's gale which swept over the lakes with such sad results to life and property. There can be no doubt but that this one warning alone has repaid the country for the outlay of the entire annual appropriation granted by Congress for the maintenance of the service. Too much credit can not be given to the Chief of the Weather Bureau and the officers in charge of lake stations for the energetic and well advised measures taken to warn vessels of the approach of the late gale and its probable severity.

NAVAL ARCHITECTURE AT THE UNIVERSITY OF MICHIGAN.

Professor Herbert C. Sadler, B. S., late of Glasgow University, Scotland, has reported for duty at the University of Michigan and will begin work in the new course in naval architecture and marine engineering at the opening of college, September 25th.

Prof. Sadler is well known to the naval architects of this country, many of whom have been his associates or under him as students, at Glasgow. He unquestionably will find a warm welcome from students and colleagues in his new field of labor.

Prof. Sadler received his training in one of the principal shipyards of the Clyde and at Glasgow University, of which institution he is a graduate. For the last four years he has been assistant to Prof. Biles, who is well known in the United States, and has been associated with him in his practice as a consulting naval architect. He has a large and varied experience in all branches of naval architecture on its practical side, and this together with his experience as assistant professor at Glasgow University renders him eminently suitable for the position he now holds.

The course of instruction in naval architecture, which is arranged as a graduate course, will commence at the second semester of the senior year and extend to the end of the fifth year. At the end of the senior year students may receive the degree of Bachelor of Science in Engineering and at the end of the fifth year that of Master of Science.

For this year only a special course has been arranged which will extend from the commencement of the coming semester to the end of June. In the future the course will be that already prescribed, i. e., will extend over one and one-half years. The work will consist of lectures, drawing and visits to shipyards, and will in general follow the course given at Glasgow.

Lectures will be given upon Ship Calculations, Strength of Ships, Resistance and Propulsion, Stability and Rolling, Ship Design, Practical Shipbuilding and Marine Engine and Boiler Design.

In the drawing class each student will perform all the calculations connected with a vessel, and will also prepare one or more designs, including complete plans and specifications.

A circular description of the course of instruction may be had by addressing Prof. Sadler direct or the Dean of Engineering Department, Ann Arbor.

SUEZ CANAL TRAFFIC.

The British consul, in his report on the trade of Port Said and Suez during 1899, states that 66 new vessels have been added to the regular steamship lines using the canal. Among foreign lines, the Japanese (Nippon Yusen Kaisha), and the French Messageries, 4 each; the Spanish Compania Transatlantica and the Austrian Lloyd, 3 each; the German Hansa and the Hamburg-American, the Rotterdam Lloyd, and the Nederland Stoomvaart Maatschappij, 2 each. In 1899 some 10,000 American troops passed through to the Philippines, and 13,000 Spanish troops returned home. The percentage of ships using the electric light in transit was 91, as against 94 in 1898. The mean duration of passage for all vessels through the canal was 18 hours 38 minutes, as compared with 18 hours 2 minutes in 1898. This slight difference has been due to quarantine, the general effective rate of transit having in no way lessened, namely, 15 hours and 42 minutes. The average net tonnage has steadily risen from 2,000 tons in 1891 to 2,743 tons in 1899. The number of vessels which have used the canal for the first time is 327. Of these, 68 belong to regular lines. Out of the 68, 36 are British, with 129,500 tons; 8 are German, with 27,600 tons; and 6 French, with 15,400 tons. A new tug called the Titan, built by Rennoldson & Sons, has been added to the canal company's establishment at Port Said. It is said to be the most powerful tug now in use in any part of the world.

According to the report, 3,607 vessels, with 221,000 passengers, passed through the canal last year, the aggregate net tonnage amounting to 9,895,000 tons. Of the vessels-2,726 were merchant ships, 736 mail steamers, and 145 war, ships and transports. The maximum draught of water allowed for vessels passing through the canal was 7.8 metres or 25 feet 7 inches. Of all the vessels that passed through in 1899, 2,125 drew less than 23 ft., as many as 586 drawing more than 24 feet 7 in. Counting only merchant vessels with cargo or in ballast using the canal, our percentage for last year was 77.2 per cent., Germany being 9.3 per cent., while France, Holland, Austria, Norway and Denmark combined only add some 10 per cent.

MORE LAKE SHIPBUILDING.

The following story has gone the rounds this week, the accuracy of which, however, we by no means vouch for: Pittsburg and associate interests have taken costly and determined steps to insure the development of an export business in iron and steel. For them, a hurried order has been placed for the construction of a fleet of ten great freighters that will ply from Lake Erie ports via the Welland canal and the Gulf of St. Lawrence, across the Atlantic. The fleet will cost something like \$3,500,000.

Orders for this extensive water transportation equipment have been divided among the Globe, Cleveland, and the Detroit shipbuilding companies, and the work of construction has begun at the yards of these companies at Lorain, Cleveland and Detroit. Various interests have placed the orders, but the notable purchasers are the Carnegie and Rockefeller interests.

For the canal boats the orders were placed within the past fortnight, and attending them, orders of even greater magnitude have been placed with the same shipbuilding interests for freighters to ply over the Great Lake in the ore and coal trade. In all, the contracts are for 19 vessels, plus the lake freighters will be built to carry a tonnage of 7,000 or 8,000 tons.

The lake carriers will cost an average of \$500,000 and the combined orders will aggregate an expenditure of \$8,000,000. Construction of the craft is to be hurried to completion.

The fleet of canal and ocean freighters which will take on consignments of iron and steel for export at Cleveland and Conneaut will stand as a formidable factor in the freight situation in this district. One of the boats of this fleet will load a tonnage, which, while small compared to the capacities of the lake freighters, will take care of the tonnage of 60 of the heaviest freight cars in use on any railroad, and which loaded would make a train over a half mile in length. With the entire canal and ocean fleet loaded, 600 of the heaviest freight cars will be deprived of tonnage, and these would form a string of trains nearly five miles long.

Proof is furnished in the placing of the tremendous contract that the iron and steel interests of Pittsburg have not been simply agitating in the matter of the necessity of an export freight rate to enable them to enter foreign markets. It is one of the methods that this interest has held in reserve to insure trade development, while the railroad interests have shown a disposition to stand in the way by procrastinating in relation to lower iron and steel rates.

There are other plans in abeyance. The iron and steel men of this district have for some time doubted that they would be favored in rates so that they could move products for export, hence the present movement.

BUFFALO HARBOR REGULATIONS.

In the entrance channel of Buffalo River, or Harbor, N. Y., between the U. S. breakwater light station and the junction of Buffalo River with the City Ship Canal, the speed of all vessels shall be limited to and not exceed six (6) miles per hour.

While dredging operations or repairs of the U. S. piers along this entrance channel are going on, all vessels shall slow down to a speed of four (4) miles per hour, while passing said dredges or pier where repair operations are in progress, upon being requested to do so by the display or waving of a red flag or red lantern, or the blowing of a succession of short whistles.

Dredges and attending scows and tugs are expected and required to give half the channel for passing vessels, and the latter are required to do the same when passing the dredges or other craft.

For the information of masters and pilots, the following data in regard to distances between points, and the minimum time required for passing between these points, are given.

From the breakwater light station to the junction of the Buffalo River and the City Ship Canal the distance is 4,200 feet, and the time required is 8 minutes.

From the Buffalo breakwater light station to the outer end of the south pier the distance is 2,100 feet, and the time required is 4 minutes.

From the outer end of the south pier to the junction of the Buffalo River and City Ship Canal the distance is 2,100 feet, and the time required is 4 minutes.

Col. Jared A. Smith and Corps of United States Engineers are on an extensive inspection tour to various ports, looking after the work that has been going on this summer.

TO EXPORT COAL.

It is stated that the French have bought one-fifth of all the British coal exported this year. Russia wants three million tons, but was unable to get it from English coal masters and may turn to the United States for her supply. Here, again, comes in the question of transportation, where are the ships to carry the coal? The quick development of a profitable and large export trade in soft coal depends almost entirely on the furnishing of tonnage to carry the coal. We haven't got the ships to carry the coal. The British tramp, that we used to hear spoken of in terms of contempt, is now busy carrying foodstuffs and camp equipment from English ports to "Tommy Atkins," in South Africa and China, and he is a mighty scarce article. Norwegian and German and Italian steamers, which used to beg for cargoes, now have plenty to do, and there are no ships, broadly speaking, to put to use as colliers. The only thing left for us to do is to go to work and build the colliers, and make them so practical that they will carry our coal cheaper than any other bottoms afloat. It is not exactly necessary to wait for the passage of any subsidy shipping bill, although such an act would greatly facilitate and expediate the enterprise. In the long run it will be just as well to build the boats purely as an investment, and fight it out with our competitors.—The Black Diamond.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
Washington, D. C. September 11, 1900.

ST. MARYS RIVER BRUSH POINT BEACON LIGHT.—Notice is hereby given that a fixed white lantern light, 12 feet above the water, was recently established on a triangular cluster of four piles, the center pile surmounted by the lantern.

This light lies in six feet of water, near the point of the shoal making off from Brush Point, southeasterly side of St. Marys river, about $\frac{3}{8}$ mile north of Lower St. Marys Range Front Light.

By order of the Light-House Board.

FRANCIS J. HIGGINSON,
Rear Admiral, U. S. Navy, Chairman.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 11TH DISTRICT,
DETROIT, MICH., September 8, 1900.

ST. CLAIR FLATS CANAL LOWER ENTRANCE, WEST SIDE—GAS BUOY PLACED.—Notice is hereby given that on Sept. 7, 1900, a gas buoy with an automatic fog-bell signal attachment was substituted for the Lower Entrance (west side) St. Clair Flats canal gas buoy No. 21.

The new buoy is attached to the same moorings and is painted and lettered the same as the former buoy, viz.: Black with "No. 21, Lake St. Clair Flats Canal Entrance" in white letters on the body of the buoy. It shows a fixed white light instead of a fixed white light during periods of 10 seconds separated by eclipses of 10 seconds, which latter was the characteristic of the former gas buoy. The characteristic of the fog bell signal is one stroke every twenty seconds and the signal is intended to be sounded at all times independent of the conditions of sea and weather.

This is an experimental buoy established by authority of the Light-House Board and masters of vessels are requested to inform this office should they pass within reasonable hearing distance of this buoy and not hear the bell ring.

The distance from this buoy at which the bell can be heard has not yet been determined.

By order of the Light-House Board.

J. C. WILSON, Commander, U. S. N.
Inspector 11th District

DOMINION OF CANADA—ONTARIO.

CHANGE IN CHARACTERISTICS OF LEFROY ISLAND LIGHT.—On the 15th instant the light shown from the light-house on Lefroy Island, being the front light of the French river range, Georgian Bay, Ontario, will be changed in character from fixed white to fixed red. The illuminating apparatus will be dioptric of the seventh order.

The light will be elevated, as formerly, 15 feet above the level of the water, and should be visible 6 miles from all points of approach by water.

F. GOURDEAU, Deputy Minister of Marine and Fisheries.
Department of Marine and Fisheries, Ottawa, Canada, September 1, 1900.

All bearings, unless otherwise noted, are magnetic and are given from seaward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

Pilots, masters or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notices of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada.

Chicago vesselmen and shipmasters are agitating the matter of a revision of the salary list of lake masters. They claim that shipmasters are not getting the remuneration that their service is entitled to.

LETTERS AT DETROIT MARINE POST OFFICE.

September 12, 1900.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Anguish, Frank, Watt.	Lash, Perry, Grecian.
Anderson, Peter, Hartnell.	Liek, Paul.
Allen, Mrs. M. J., Lackawana.	Miller, Wm. A., Bessemer.
Brooks, H. A., Albany.	Manson, Walter J.
Bandlow, Albert, Wawatam.	McKenzie, Geo. R., Harvard.
Byers, Miss Lillian.	McDonough, T., J. E. Owen.
Barrie, Geo. A., Volunteer.	McGregor, Dan-2, Quito.
Bull, Miss Minnie.	Nothersall, A. M.
Cumming, Alexander.	Papinaw, Mrs. Maggie, Street.
Carlson, N. S.	Papinaw, Mrs. Will, Street.
Dirling, Mrs. James, Paris.	Papinaw, Mr. & Mrs. Wm. 2,
Denny, Joe, Arizona.	[Street.
Dibble, Mrs. Lola.	Plassynski, Ed., J. Duncan.
Dibble, Mrs. John.	Rivard, Vital-3, J. M. Hutch-
Eagen F. D., Andaste.	[inson.
Eaton, B. F.	Reid, Wm. C.-2, W. D. Rees.
Ferrel, John T., Arizona.	Randall, John W., J. E. Owen.
Gauter, Frank, Continental.	Regan, M. J., Rees.
Gorman, F., Vulcan.	Reekie, E. M.
Hasselgren, Walter-2, Bge 126	Rice, D. W.
Hull, Earl B. Andaste.	Sears, F. N. Pine Lake.
Humphrey, Miss Pearl.	Smith, Philo G.
Hoover, Emerson, Majestic.	Shroder, Paul, Empire City.
Harris, I. C., Tacoma.	Sheldon, Frank, Continental.
Howard, Alvaro.	Shaffer, R. A.
Haley, Benjamin, A.	Trepka, Henry V.2, Spokane.
Hill, William.	Thompson, Harry D., M. M.
Halley, Ed.	Thompson, Samuel. [Drake.
Helmer, Mrs. I. W., Illinois.	Utley, R. Z.
Higgs, C. Fred.	Watson, Capt. Fred.
June, Burt.	Williamson, B., J. E. Owen.
Lally, Thos., Bessemer.	Weston, George, Redington.
Loughlin, J. C. O., J. Duncan.	Wilson, Capt., Admiral.
Leahy, Cornelius.	Williams, Robert G.

F. B. DICKERSON, Postmaster.

FLOTSAM, JETSAM AND LAGAN.

The schooner Sardinia, which went ashore at Hedgehog harbor in Green bay, a couple of months ago, has been driven upon the beach high and dry. She still remains intact, however, the seas not having done her much damage as far as can be seen.

The schooner H. W. Sage, sunk near Algonac in a collision with the steamer Chicago, has been raised by the McMahon Wrecking Co., of Port Huron, sufficiently to tow to Port Huron for repairs. Her cargo of coal was not lightered, but was raised with the vessel.

One of the biggest deals in lumber and sawmill property in northern Minnesota in a long time has just been effected. The St. Croix Lumber Company, of Stillwater, has purchased the interests of the Knock Lumber Company at and in the vicinity of Winton, near Ely. The deal is said to involve in the neighborhood of \$500,000.

The wreck of the schooner Fontana, which lies in the center of the channel near Fort Gratiot, is getting to be a harder wrecking job every day. Since she went to the bottom she has settled steadily, and during the last few days has gone down over two feet. In a short time nothing will be seen above the surface of the river.

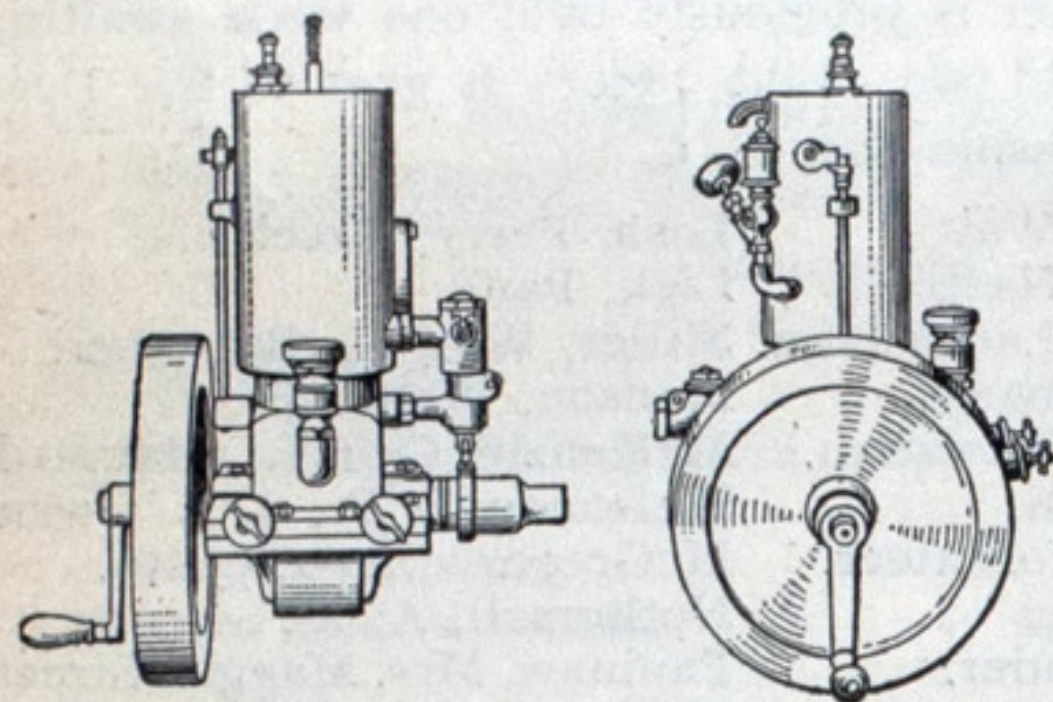
Lorain has now one of the best harbors on the lakes. The entrance is 200 feet wide between the piers. On each side of the entrance out side of the piers a channel 500 feet wide has been dredged to navigable water. The entrance therefor is 1,200 feet wide outside of the piers and 200 feet inside. The water is 22 feet in all of this territory and will not easily silt up. The harbor will permit boats to enter for several years to come without dredging, at least past experience shows that silting is not a feature at that port.

It has been discovered that the damage to one of the boilers of the steamer Carlo, now at the Detroit drydock, was caused by oil getting inside the boiler through the surface condenser, thus damaging the plates. It is a singular fact that the oil and fresh water will injure the plates of a boiler, while a mixture of oil and salt water does not so seriously affect them. The steamer Leafield, also a salt water ship, is laid up at the Delta lumber dock undergoing similar repairs to her boilers, from the same cause.

Some time in October, when the weather gives promise of being the stormiest, a committee of five members of the board on life saving appliances, composed of revenue marine officers and superintendents of life saving districts, will go to Marquette, Mich., for the purpose of witnessing exhaustive heavy weather trials of a 34 foot life-boat propelled by a gasoline motor. The motor lies in the last compartment aft and weighs something like 11 tons. In the smooth water trials it revolved the twin screws sufficiently fast to send the boat through the water at better than 8 miles an hour. But it puts the boat down in the water so that her deck is even with the surface. The investigators think her deck should be at least a foot above the water and that two feet or more of side should be out of water.

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by ship chandlers generally.

AN IMPORTANT TREASURY DECISION.

WIRE ROPE.

Wire rope made of round steel wire, valued at over 4 cents per pound, with a hemp core, held to be dutiable under paragraph 137, act of 1897, at 40 per cent. ad valorem on the value of the completed rope, plus 1 cent per pound on the weight of the finished article, and two-tenths of a cent per pound for galvanizing.

Wire rope composed of round steel wire having a hemp core, valued at less than 4 cents per pound, held to be dutiable at the maximum rate of duty imposed upon the wire used in its manufacture.

G. A. 4329 cited and distinguished.

Before the U. S. General Appraisers at New York, September 4, 1900.

In the matter of the protests, 42023b, etc., of The Upson Walton Company, against the decision of the collector of customs at Cleveland, Ohio, as to the rate and amount of duties chargeable on certain merchandise, imported per the vessels and entered on the dates named in the schedule.

Opinion by Fischer, General Appraiser.

The merchandise consists (1) of iron or steel wire rope with a hemp core, valued at over 4 cents per pound; (2) of iron or steel wire rope with a hemp core, valued at less than 4 cents per pound; (3) of galvanized wire sash cord having a hemp core, valued above 4 cents per pound.

The merchandise was assessed for duty under paragraph 137, act of 1897, at the maximum rate of duty imposed on the wire used in the manufacture of the article, with the additional rate of 1 cent per pound for the finished article and two-tenths of 1 cent per pound additional on the galvanized wire.

The importers protested against this assessment, claiming that the classifying officer erred in his interpretation of paragraph 137 in assessing duty upon the value of the finished wire rope, and that duty should be assessed in the first place upon the wire as wire, adding thereto 1 cent per pound, together with the duty provided for the galvanized wire, and that the duty, as assessed, was not intended by Congress to be assessed upon the wire rope, as such, but upon the wire from which it is made.

The protests involve a question of law only. The pertinent provisions of paragraph 137 are as follows:

Par. 147. Round iron or steel wire, not smaller than number thirteen wire gauge, one and one-fourth cents per pound; smaller than number thirteen and not smaller than number sixteen wire gauge, one and one-half cents per pound; smaller than number sixteen wire gauge, two cents per pound: Provided, that all the foregoing valued at more than four cents per pound shall pay forty per centum ad valorem. * * * Provided, That articles manufactured from iron, steel, brass, or copper wire shall pay the rate of duty imposed upon the wire used in the manufacture of such articles, and in addition thereto, one and one-fourth cents per pound, except that wire rope and wire strand shall pay the maximum rate of duty which would be imposed upon any wire used in the manufacture thereof, and in addition thereto one cent per pound; and on iron or steel wire coated with zinc, tin, or any other metal, two-tenths of one cent per pound in addition to the rate imposed on the wire from which it is made.

Congress did not intend to impose a duty merely upon the wire used in manufacturing wire rope and wire strand. It clearly imposed a duty upon rope or strand as entireties and made the rate of duty for such articles according to that imposed upon any wire used therein. The reference to the wire was clearly intended only to name a rate which, after ascertainment, should be assessed against the entire article in its imported form.

To sustain the importer's contention would destroy the force of the entire provision for wire rope or strand as manufactured articles by their names and designations, and permit the free entry of one of its essential components, to wit, the hemp core.

The only proper method for an assessing officer to pursue is to ascertain "the maximum rate of duty which would be imposed upon any wire used in the manufacture thereof," and then assess duty according to that rate on the entire imported article, adding thereto the duty of 1 cent per pound and two-tenths cent per pound for coating with zinc or tin. In other words, the paragraph might be looked upon as covering the component material of chief value, which affixes a duty according to the rate for such component, and thereupon is assessed against the entire article.

If the importer's contention was correct, then in every manufactured article imported duty can only be assessed against the chief component, and the remainder of the article would escape all duty and be entitled to free entry.

The paragraph fixes a rate of duty for the entirety. The reference to the wire is merely for the purpose of establishing that rate. Its language is clear and unequivocal. We quote it:

Wire rope and wire strand shall pay the maximum rate of duty which would be imposed upon any wire used in the manufacture thereof.

Upon the hearing upon these protests the importers stated that they relied upon an expression of opinion by this Board in G. A. 4329, which was as follows:

While the duty of 40 per cent. should have been assessed upon the value of the galvanized wire and not upon that of the finished rope, the protest is not against this excessive exaction, the only claim being against the assessment of two-thirds of a cent per pound additional.

The contention which gave rise to this decision (G. A. 4329) was that wire paying 40 per cent. ad valorem duty was not liable to the specific duty of two-tenths of a cent per pound for galvanizing, and the point in question in the case now under consideration was not involved, and the language used in this paragraph was mere dictum, irrelevant to the question raised, and was not germane to the case.

We are clearly of the opinion that Congress provided that duty should be assessed upon wire rope and wire strand according to the rate imposed upon any wire used therein, and not merely for that wire. If the opinion expressed in G. A. 4329 were correct, the duty upon such articles could be ascertained only by separating the various parts in order to be able to assess the dutiable portion. This could not be done without destroying them and making the importation valueless. In the light of the uniform rulings of the courts and this board, this would be illegal as well as improper, for classifying officers must assess merchandise in its imported form. This being wire rope must be assessed as such at the rate of duty provided for any wire used therein.

The protests are overruled and the decision of the collector affirmed.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 10TH DISTRICT,
BUFFALO, N. Y., September 7, 1900.

EAST CHARITY SHOAL, LAKE ONTARIO, N. Y.—Notice is hereby given that a nun buoy painted red and numbered 2, has been placed in 20 feet of water to mark the easterly edge of East Charity Shoal, Lake Ontario, New York.

This buoy is about 1 3/8 miles E. S. E. of Charity Shoal gas buoy.

It is recommended that vessels bound to or from the main channel of the St. Lawrence river, and using the passage between Galloo and Main Duck Islands, should keep to the eastward of this buoy.

LAKE SUPERIOR, SOUTH SHORE.

PORTAGE RIVER PIERHEAD LIGHT STATION.—Notice is hereby given that on August 30, 1900, a temporary fixed red lens lantern was exhibited from a white structure recently erected on the extreme end of the pier, on the prolongation of the east side of cut No. 1, between Keweenaw bay and Portage river.

A small white oil house is attached at the bottom of the mast.

The focal plane of the light is 37 feet above mean lake level, and the light will be maintained until replaced by the projected permanent structure.

PORTAGE RIVER AND LAKE.

PORTAGE RANGE FRONT LIGHT NO. 323.—Notice is hereby given that on August 30, 1900, a fixed white light of the fifth order was exhibited from the re-erected white, square frame tower on a crib, on the west bank of Portage river, near its mouth.

The focal plane of the light is 21 feet above mean lake level, and the light may be seen 11 miles in clear weather, the observer's eye 15 feet above the level of the lake.

This light takes the place of the lantern light shown from the same position since the destruction of the previous light.

The lights on Portage river and lake have been re-located and new ones established to conform to the existing conditions resulting from recent channel improvements, and should read as follows:

PORTAGE RANGE REAR LIGHT.—A fixed white sixth order light on a square tower on a white frame dwelling; focal plane, 27 feet; distance visible, 12 miles. About 730 feet N. 3/4 W., in rear of preceding.

Remarks.—Range for entering Portage river from Keweenaw bay.

LIGHT NO. 0.—A fixed white lantern light on a small white house on crib; focal plane, 11 feet. In the water on the easterly side of channel, above Edgerton's dock.

Remarks.—In going up the river this light makes, with the Portage range front light, a range astern, which should be followed to its intersection with the range marked by lights Nos. 1 and 2, which range should then be taken up.

RANGE NOS. 1 AND 2.

RANGE LIGHT NO. 1 (FRONT).—A fixed white lantern light on target-house; focal plane, 11 feet. On easterly bank, about half way between Edgerton's and Messner's docks.

RANGE LIGHT NO. 2 (REAR).—A fixed white lantern

light on white post with target; focal plane, 32 feet. On easterly side of the river, 518 feet S. E. $\frac{1}{2}$ S., in rear of preceding.

Remarks.—In going up the river, these lights are in range astern; this range should be followed until its intersection with the range marked by lights Nos. 3 and 4.

RANGE NOS. 3 AND 4.

RANGE LIGHT NO. 3 (FRONT).—A fixed white lantern light in front of white target-house; focal plane, 10 feet. On edge of bank on northerly side of east end of cut No. 3.

RANGE LIGHT NO. 4 (REAR).—A fixed white lantern light on post with white target; focal plane, 30 feet. In marsh on north side of bayou, N. N. W. $\frac{1}{2}$ W., in rear of preceding.

Remarks.—In going up the river these lights are in range ahead; this range should be followed to its intersection with the range formed by lights Nos. 5 and 6.

RANGE NOS. 5 AND 6.

RANGE LIGHT NO. 5 (FRONT).—A fixed white lantern light on white target-house on pile cluster; focal plane, 12 feet. In the water on the easterly side of the channel, near the lower entrance to cut No. 2.

RANGE LIGHT NO. 6 (REAR).—A fixed white lantern light on white post with target; focal plane, 28 feet. In marsh on easterly side of river, 730 feet S. E. by E. $\frac{1}{8}$ E., in rear of preceding.

Remarks.—In going up the river these lights are in range astern; this range should be followed to its intersection with the range marked by lights Nos. 7 and 8.

RANGE NOS. 7 AND 8.

RANGE LIGHT NO. 7 (FRONT).—A fixed white lantern light on white target house; focal plane, 11 feet. On bank at edge of marsh of Princess Point.

RANGE LIGHT NO. 8 (REAR).—A fixed white lantern light on white post with double target; focal plane, 35 feet. In the water, at Princess Point, W. N. W. $\frac{1}{8}$ W., in rear of preceding.

Remarks.—In going up the river these lights are in range ahead; this range should be followed to its intersection with the range line marked by lights Nos. 9 and 10.

RANGE NOS. 9 AND 10.

RANGE LIGHT NO. 9 (FRONT).—A fixed red lantern light on white target house on pile cluster; focal plane, 12 feet. In the water on the southerly side of river, near mouth of bayou.

RANGE LIGHT NO. 10 (REAR).—A fixed red lantern light on white post with double target; focal plane, 28 feet. In marsh near bayou, W. $\frac{3}{8}$ S., in rear of preceding.

Remarks.—In going up the river, this range should be followed until the red sector of Princess Point Light is entered.

PRINCESS POINT LIGHT (FORMERLY LIGHT NO. 11).—A 180° fixed red lens-lantern light, in front of small white house, on edge of river; focal plane, 10 feet. On northerly bank of the river, at lower turn at Princess Point, and nearly opposite to light No. 9.

Remarks.—The red sector of this light covers the turn at this point, and extends from range 9-10 to range 12-10.

RANGE NOS. 12 AND 10.

RANGE LIGHT NO. 12 (FRONT).—A fixed white lantern light on small white house on pile cluster; focal plane, 12 feet. In the water on the westerly side of the channel, at upper turn off Princess Point. N. $\frac{5}{8}$ E., in front of light No. 10.

RANGE LIGHT NO. 10 (REAR).—See above.

Remarks.—In going up the river this range should be taken up on leaving the red sector of Princess Point light;

this range will then be astern, and light No. 14 will be directly ahead N. $\frac{5}{8}$ E.

RANGE NOS. 13 AND 8.

RANGE LIGHT NO. 13 (FRONT).—A fixed white lantern light on white target house; focal plane, 12 feet. On easterly bank of the river, above Princess Point, N. $\frac{1}{2}$ W., in front of light No. 8.

RANGE LIGHT NO. 8 (REAR).—See above.

Remarks.—In going up the river these lights are in range astern, which line should be followed to its intersection with the range marked by lights Nos. 12 and 10, and that range then followed to its intersection with the range marked by lights Nos. 14 and 15.

Lights from 339 to 343, inclusive, remain as described in List of Lights and Fog Signals.

COLE CREEK LIGHT.—A fixed white lantern light on small white house on pile cluster, near shore, in 4 feet of water; focal plane, 12 feet. On westerly side of the river, $\frac{1}{8}$ mile below mouth of Coal creek, and $2\frac{1}{2}$ miles to the westward of Houghton and Hancock bridge.

HARRINGTON ISLAND LIGHT.—A fixed red lantern light in small white house on pile cluster, near shore, in three feet of water; focal plane, 12 feet. On westerly side of the river, at south end of Harrington Island, and about $4\frac{1}{2}$ miles above Houghton and Hancock bridge.

HIGH POINT LIGHT.—A fixed white lantern light in small white house on pile cluster, in six feet of water; focal plane, 12 feet. On easterly side of the river, at High Point, about 5 miles above Houghton and Hancock bridge.

Lights Nos. 344 and 345, remain as described in List of Lights and Fog Signals.

PORTAGE LAKE SHIP CANALS RANGE.

PORTAGE LAKE SHIP CANALS RANGE (FRONT) LIGHT.—A fixed red lantern light in small square white lamp house, on the east pier, about 450 feet from south end; focal plane, 8 feet.

PORTAGE LAKE SHIP CANALS RANGE (REAR) LIGHT.—A fixed red lantern light on post with white target; focal plane, 28 feet. On side of road, N. by E. $\frac{1}{2}$ E., in rear of preceding.

Remarks.—Range for approaching south end of canal. Bearings are true; miles are statute miles.

This notice affects the List of Lights and Fog Signals, Northern Lakes and Rivers, 1900, pages 66 and 68, after No. 322 to No. 347, and the List of Beacons and Buoys, Northern Lakes and Rivers, 1900, pages 90, 91, 92 and 93.

FRANCIS J. HIGGINSON,
Rear Admiral, U. S. N., Chairman.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, NINTH DIST.,
Chicago, Ill., September, 6, 1900.

MALLETTOA SHOAL.—Notice is hereby given that a red gas buoy, showing a fixed white light during periods of ten seconds, separated by eclipses of ten seconds, has been placed in twenty-four feet of water on Mallettoa Shoal, about five-eighths of a mile S. by E. one-quarter E. from Grays Reef Light Vessel, No. 57, northerly end of Lake Michigan.
By order of the Light-House Board.
F. M. SYMONDS, Commander, U. S. N.,
Inspector Ninth Light-House District.

VESSELS CLASSED.

American Bureau of Shipping, New York, September 10th, 1900. Vessels classed and rated by the American Bureau of Shipping in the Record of American and Foreign Shipping:
Bark C. P. Dixon, barkentine E. S. Powell and schooner Thomas S. Dennison.

SHIPPING AND MARINE JUDICIAL DECISIONS.
(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Admiralty—Dismissal of Suit.—In admiralty, as in equity, it is within the discretion of the court to dismiss a suit without costs, where the complaining party is entitled to nominal damages only. *Munson vs. Straits of Dover S. S. Co., Limited*, 102 Fed. Rep. (U. S.) 926.

Navigable Waters—Riparian Rights of Adjoining Owner.—Where a town by virtue of its charter becomes the owner of both land and water within its limits, a grant by such town of land adjacent to the navigable water conveys an easement in the water. *Town of North Hempstead vs. Gregory*, 66 N. Y. Supp. 28.

Navigable Waters—Appropriation of Fee—Injunction.—A guarantee of land adjacent to navigable waters, who exercises his riparian rights by filling the bay with old vessels, to be broken up and dismantled, takes more than his easement in such waters, and appropriates the fee; and such appropriation will be restrained. *Town of North Hempstead vs. Geogory*, 66 N. Y. Supp. 28.

Proximate Cause of Loss of Tow.—The tug having afterwards made an attempt to rescue the tow, which was unsuccessful owing to a severe storm, because of which the failure could not be attributed to the fault of either vessel, the original grounding must be regarded as the proximate cause of the subsequent loss of the tow and cargo in such storm, and the damages divided accordingly. *The N. and W. No. 2*, 102 Fed. Rep. (U. S.) 921.

Admiralty—Costs—Settlement out of Court.—In a suit in admiralty, in forma pauperis, to recover for services rendered by libellant as master of a vessel, the officers of court cannot be deprived of their fees by a settlement out of court; and where the defendant makes such settlement without the knowledge of the libellant's proctor, and obtains a writing dismissing the suit, he will be taxed with the costs. *Erratt vs. Humphreys*, 102 Fed. Rep. (U. S.) 925.

Arbitration—Breach of Agreement to Arbitrate—Recovery of Damages.—Substantial damages are not recoverable for breach of an agreement to arbitrate any dispute which might arise under a contract, where such agreement remains wholly executory, because there is nothing by which the damages can be measured; the fact that one party, refusing to abide by the agreement, brought a suit upon the contract, in which he was defeated, but was not required to pay costs, does not entitle the other party to recover the costs expended in defending the suit, as damages for breach of agreement to arbitrate. *Munson vs. Straits of Dover S. S. Co., Limited*, 102 Fed. Rep. (U. S.) 926.

Tug and Tow—Grounding of Tow—Fault.—A tug with two heavily laden tows on a line, the whole extending 2,400 feet in length, was passing through a channel near the northern limit, which curved so as to require the tug to keep continually changing her course to the southward. There was sufficient room to pass through in safety, but the first tow, which was a schooner converted into a coal barge, and in charge of a master, failed to follow closely the changing course of the tug, and got beyond the limits of the channel, grounding in shallow water. Held, that the tug was in fault because of the failure of the master to keep watch to see that the tows were following so as to keep inside the channel, and that the master of the tow was also in fault for not using the helm, as he might have done, to keep her in the course of the tug, and within the line of buoys which marked the channel. *The N. and W. No. 2*, 102 Fed. Rep. (U. S.) 921.

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Capt. JAMES A. SMITH, Gen. Supt. Old Dominion Steamship Co., Pier 26, North River, N. Y.

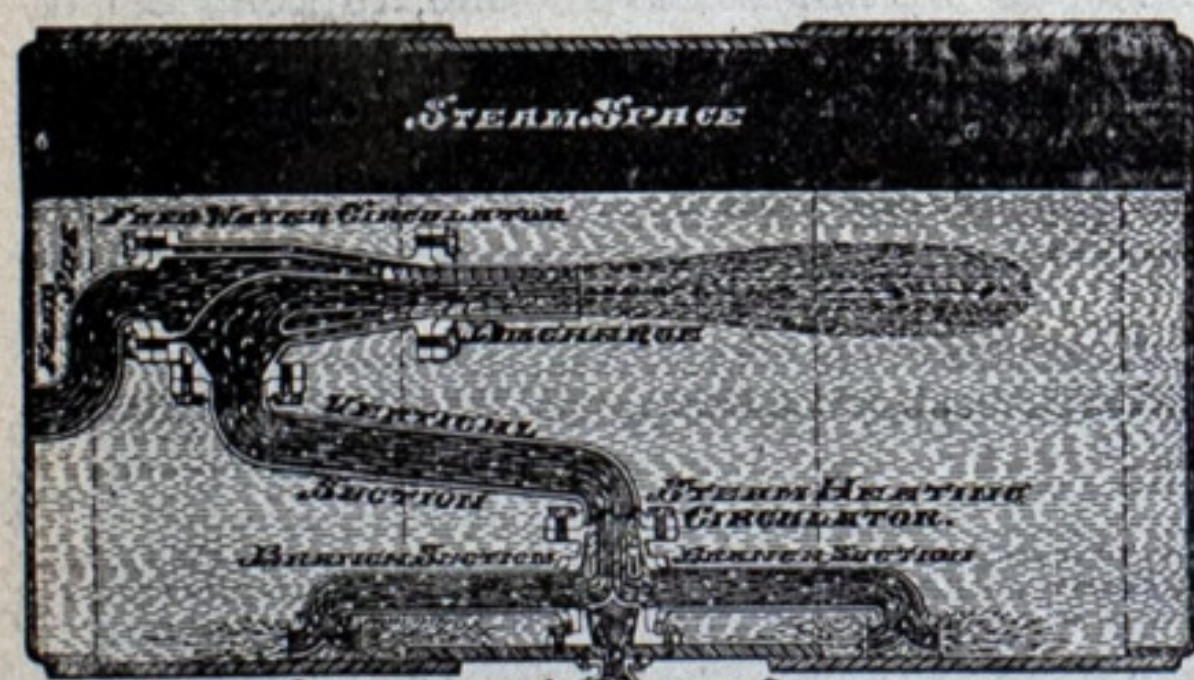
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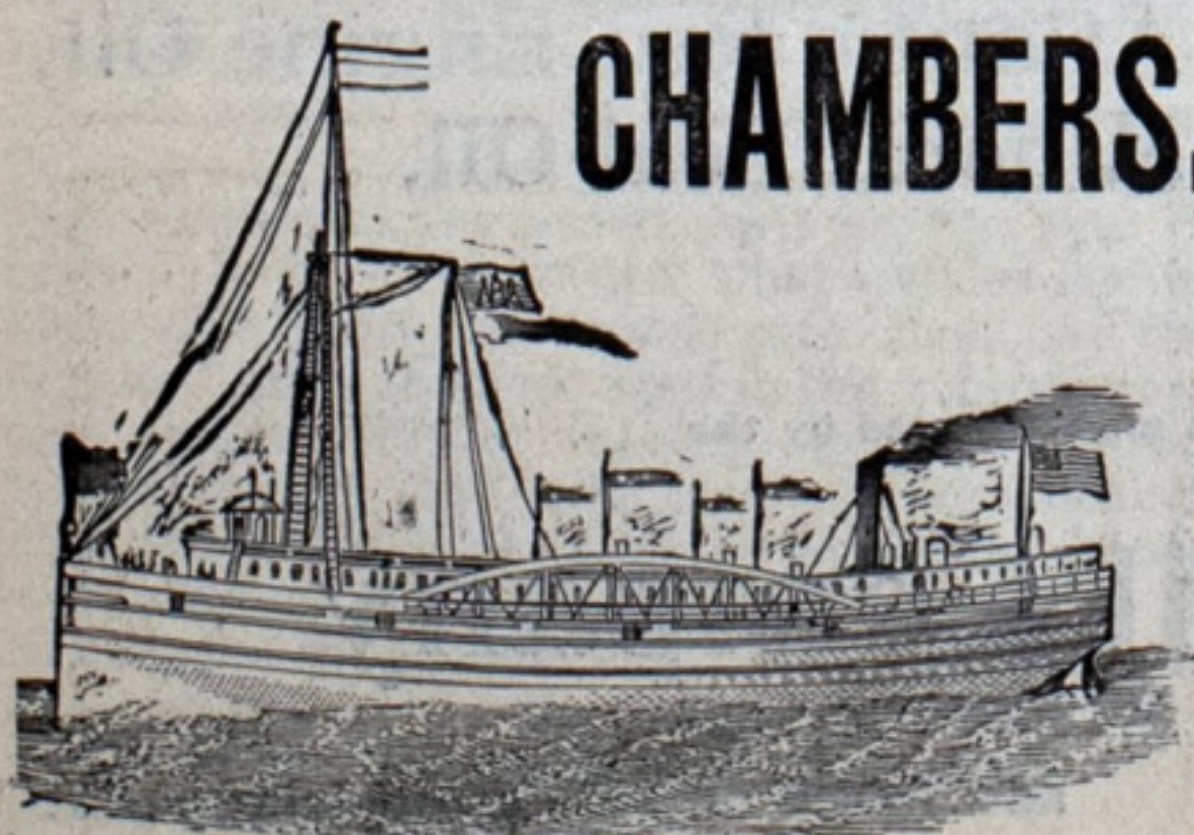
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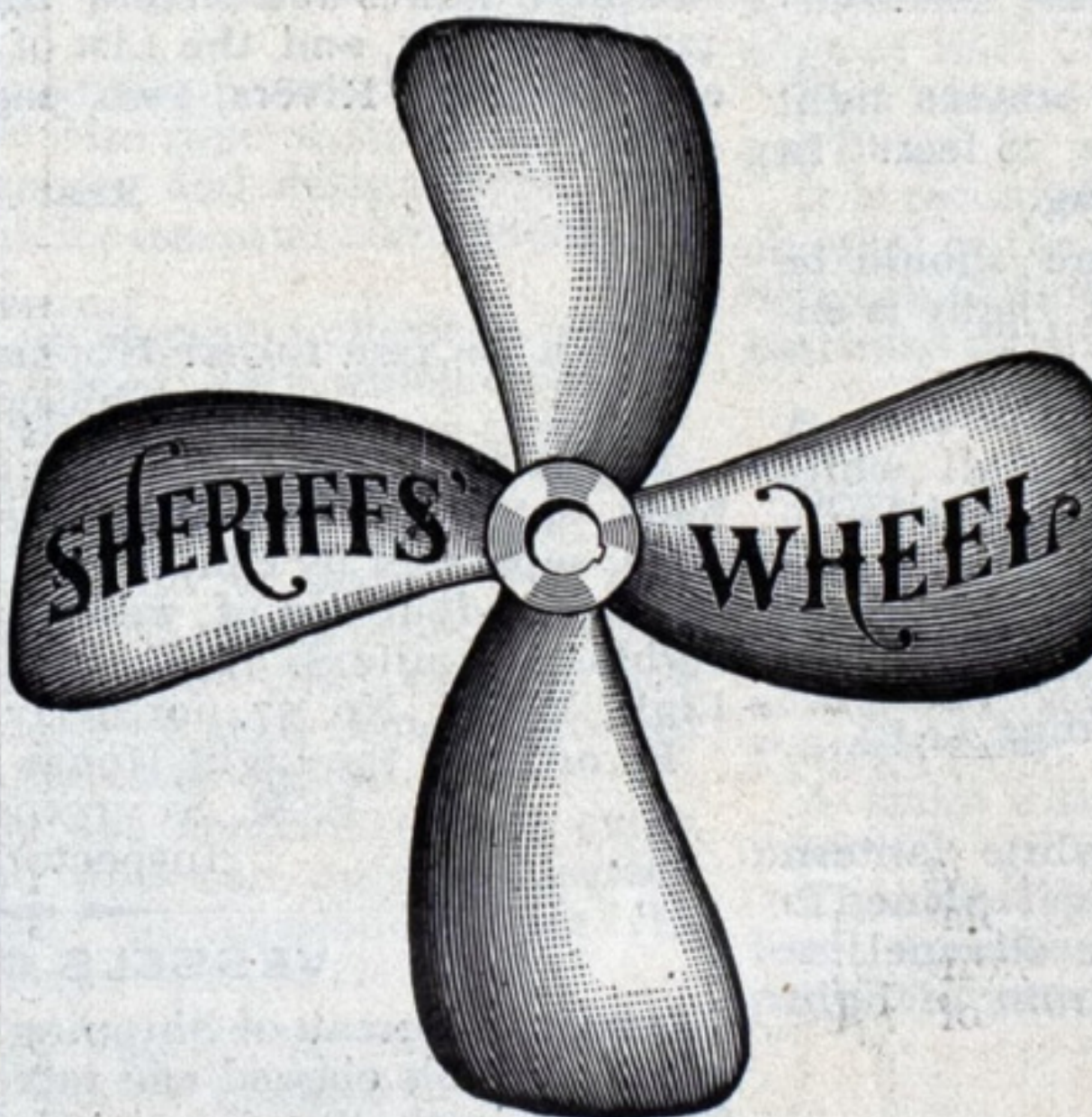
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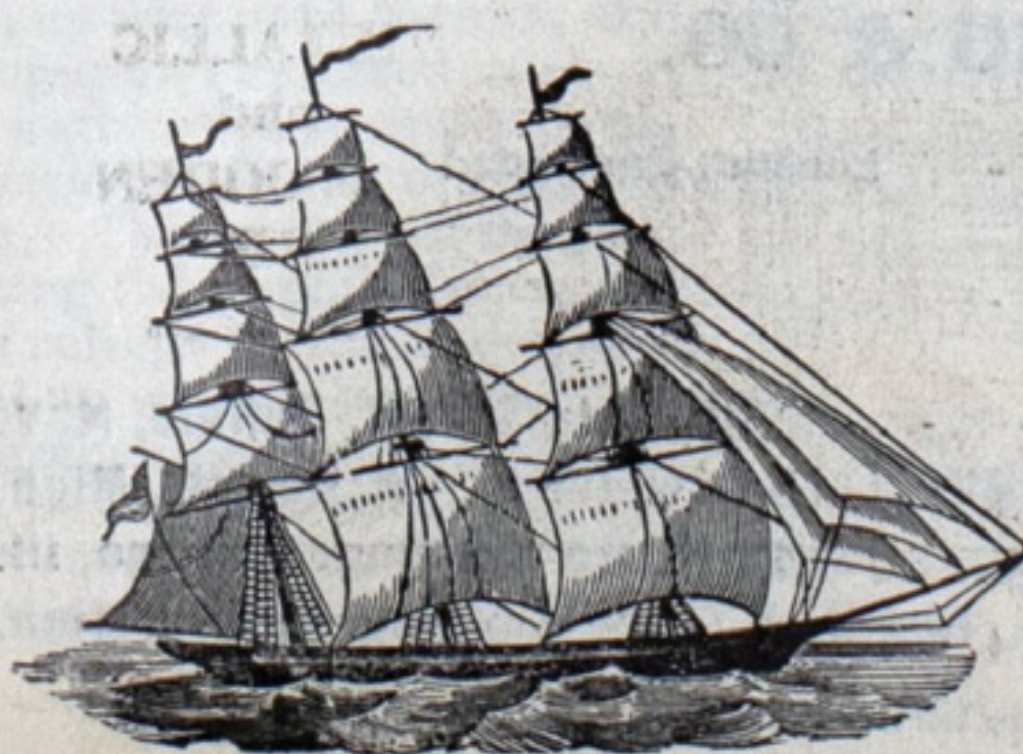
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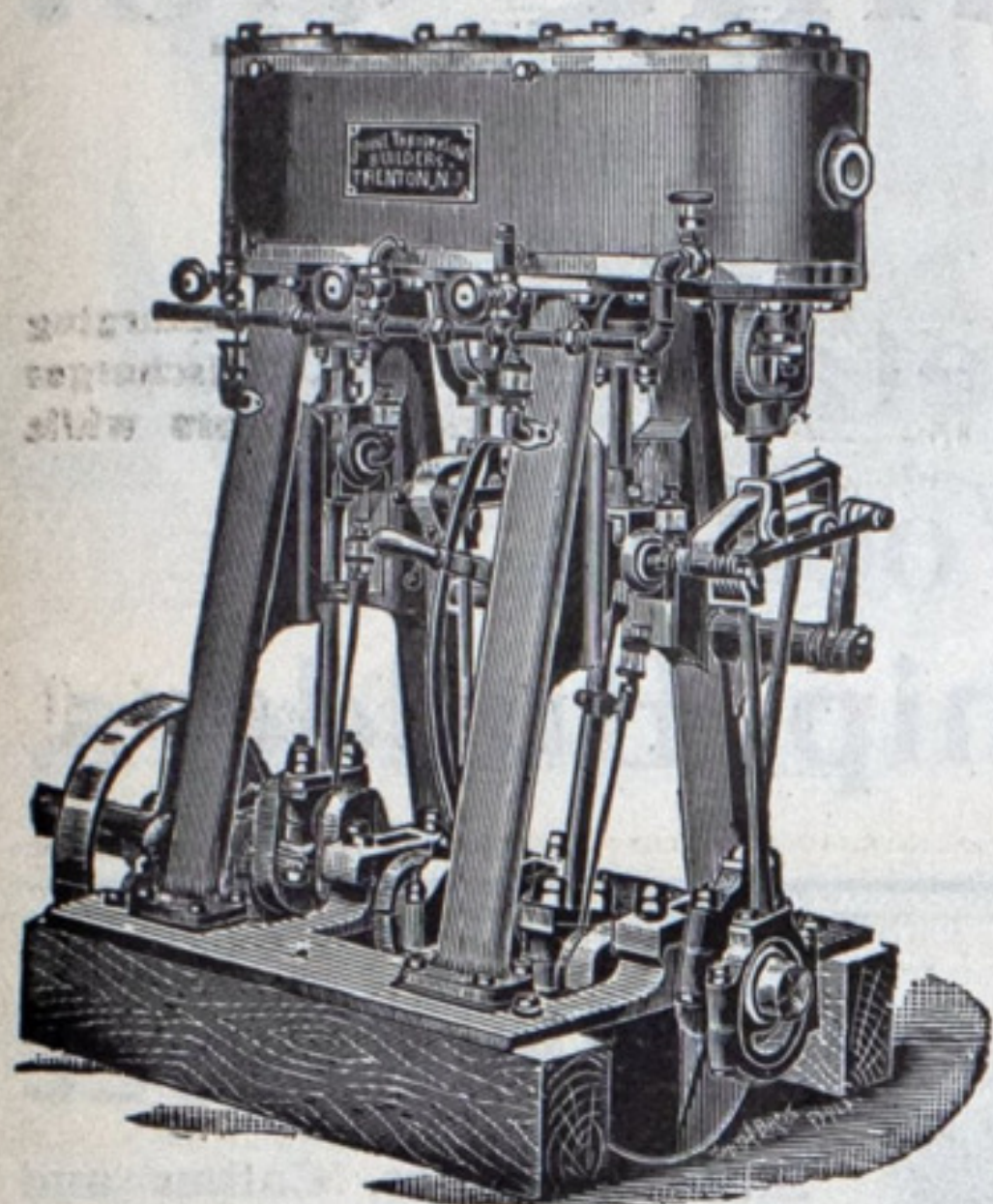
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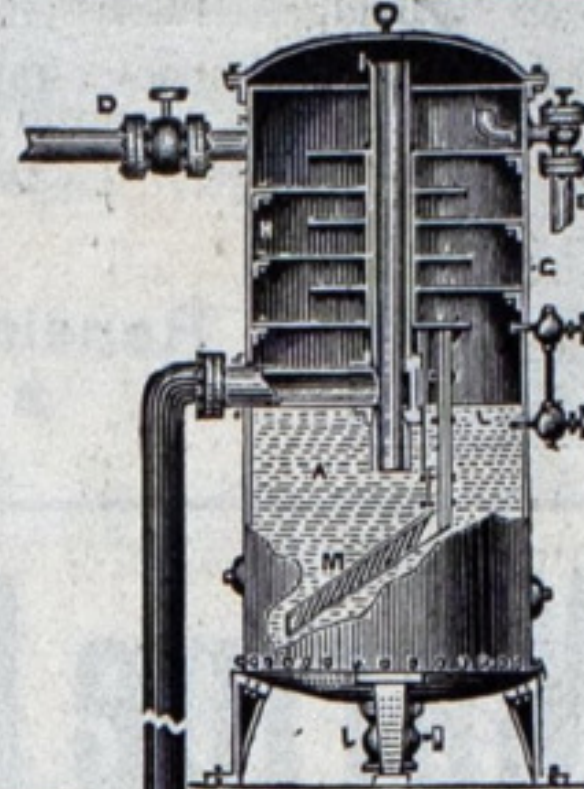
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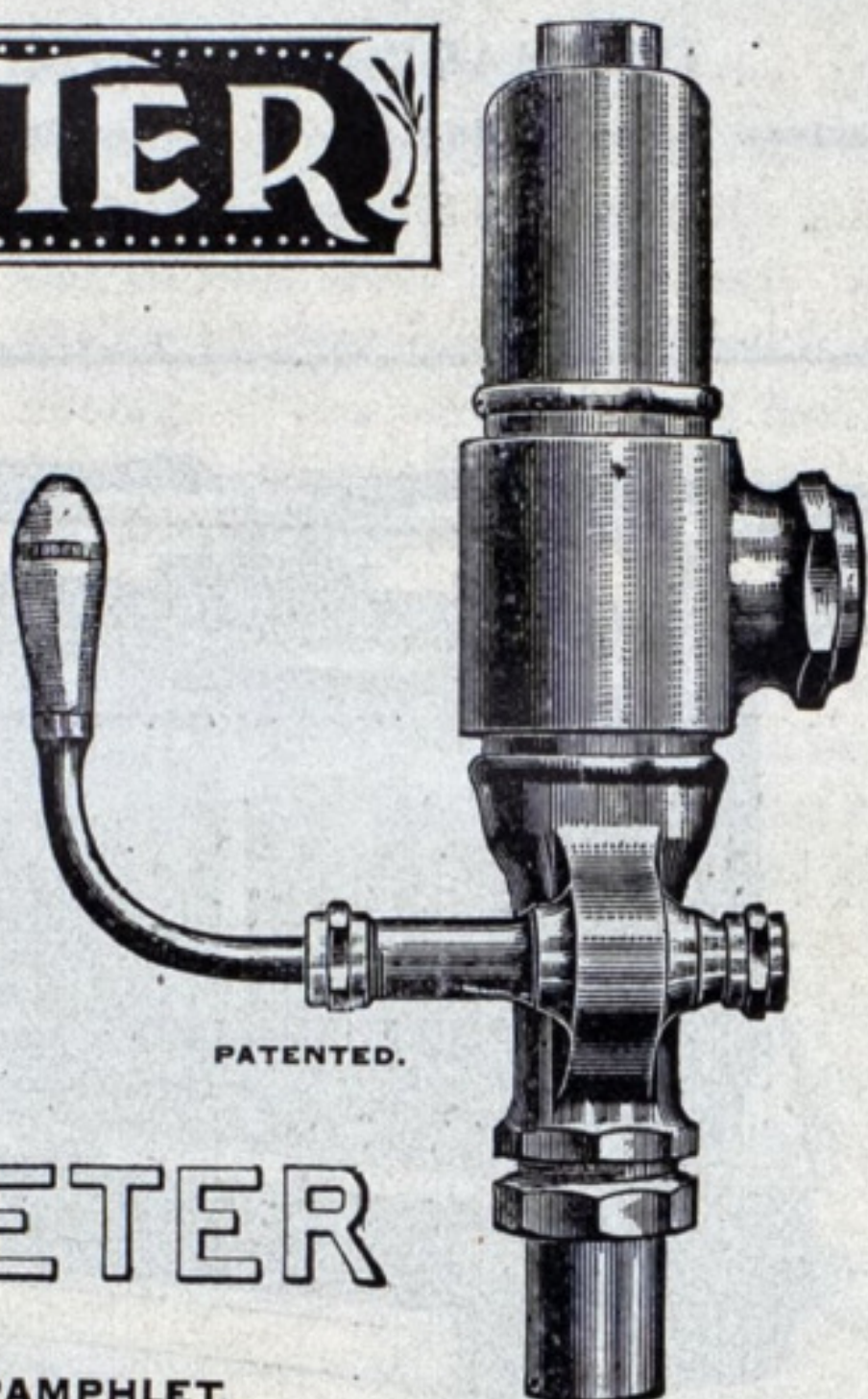
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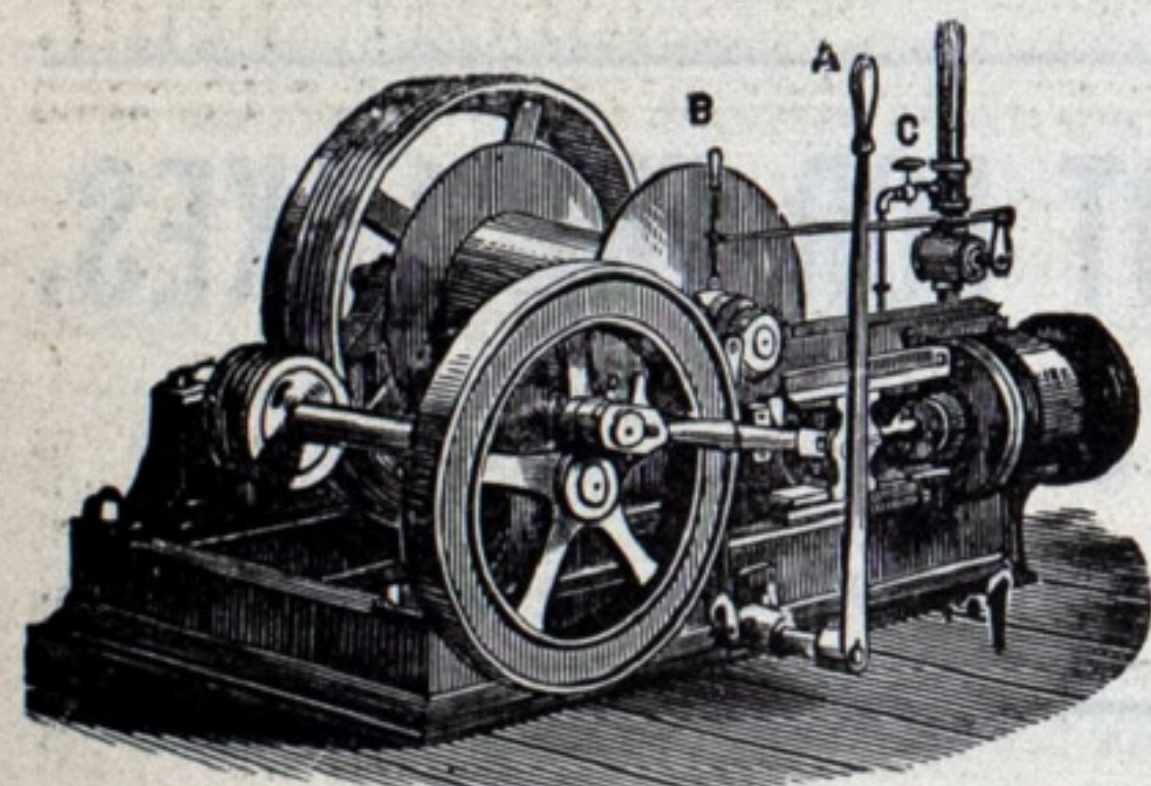
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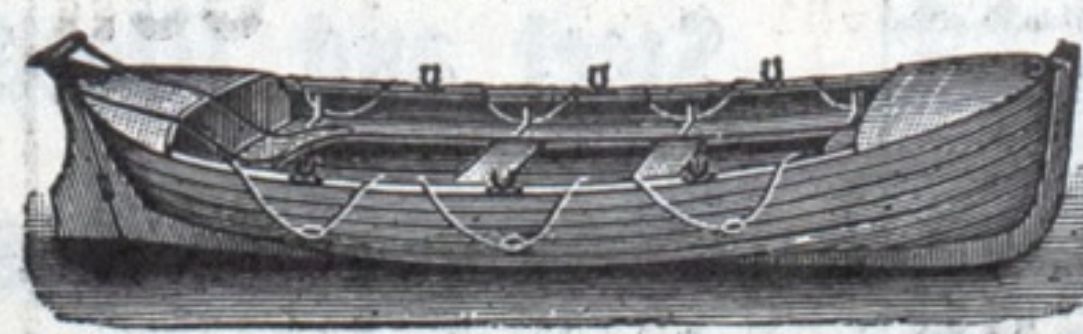
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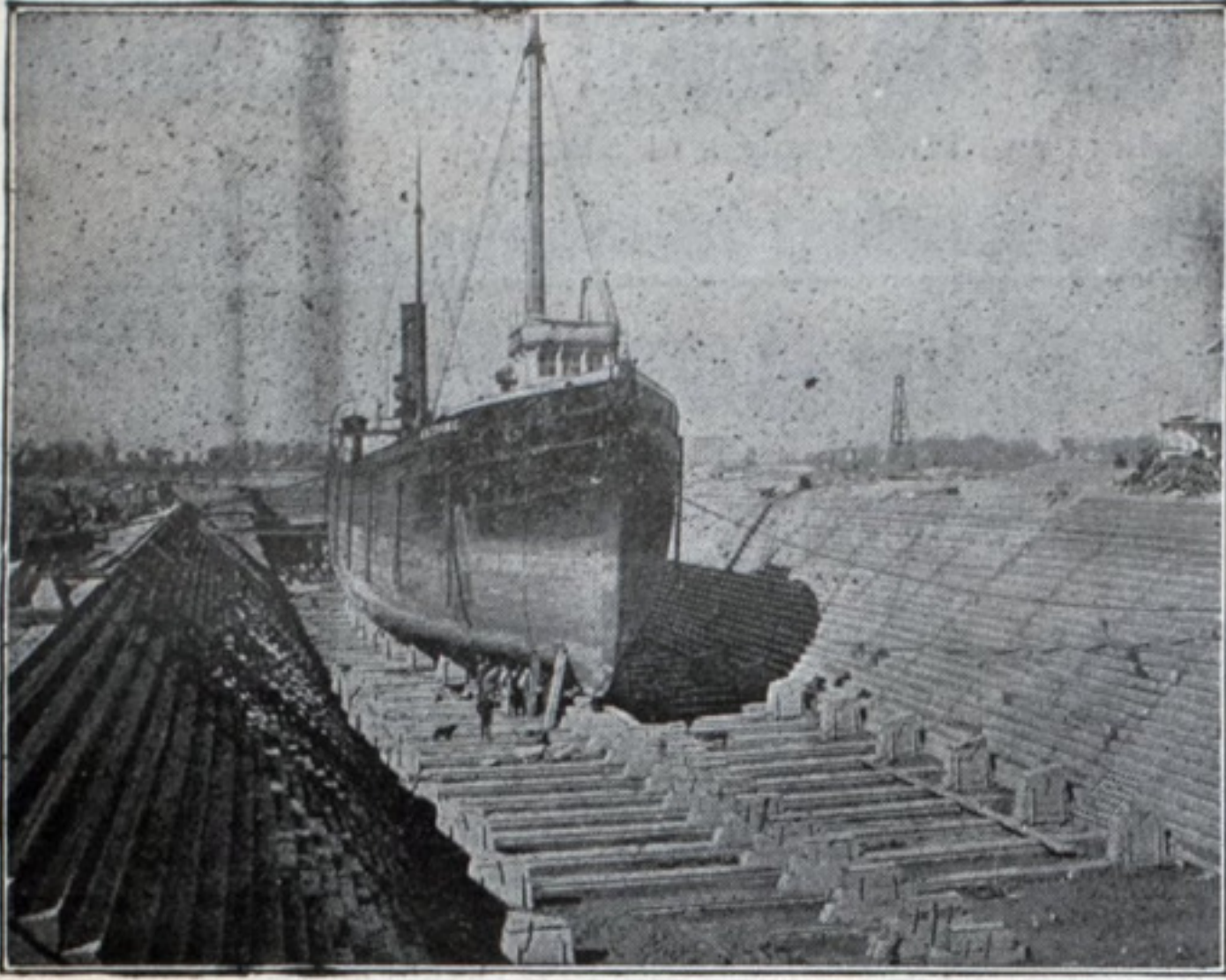
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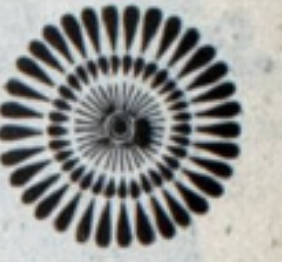
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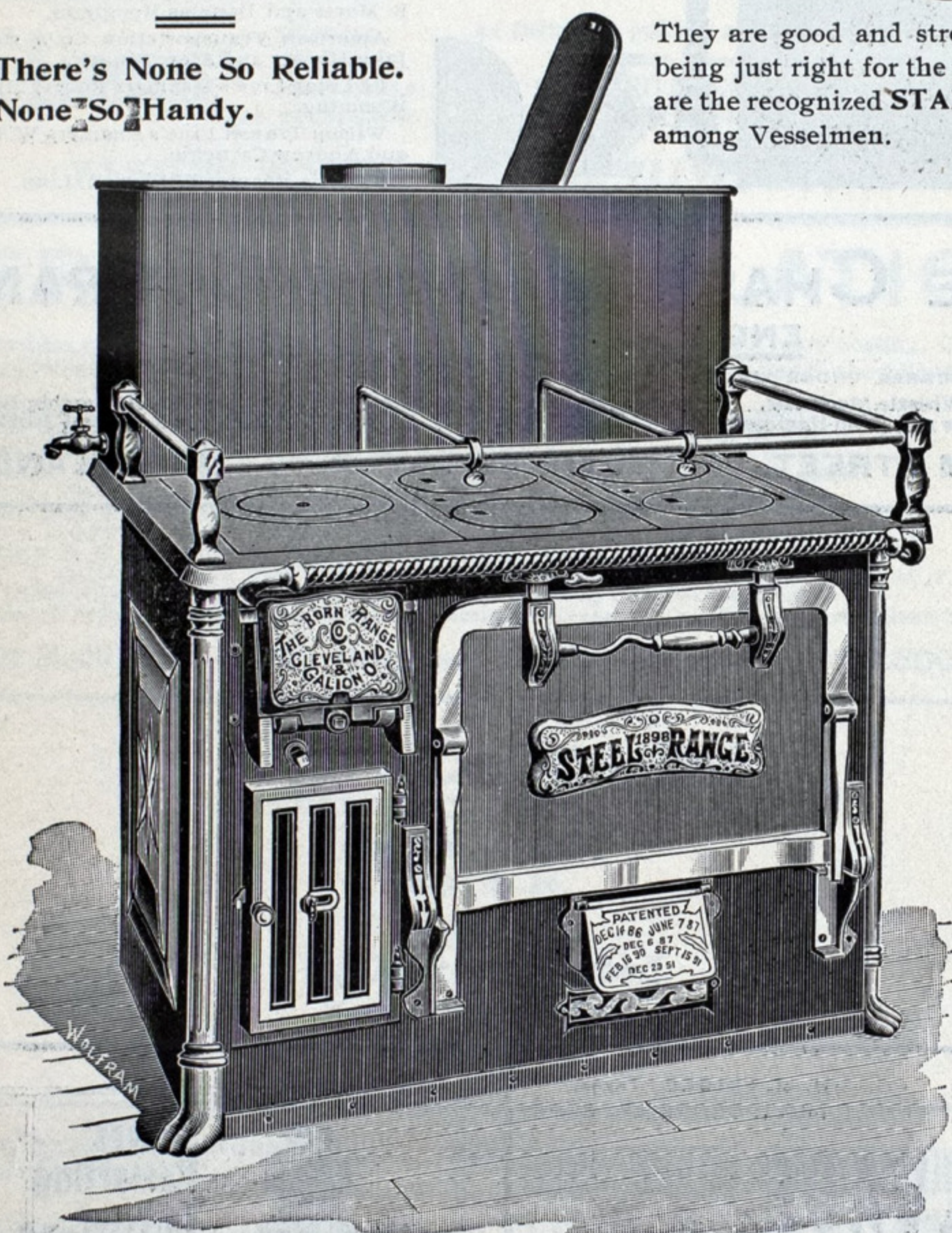
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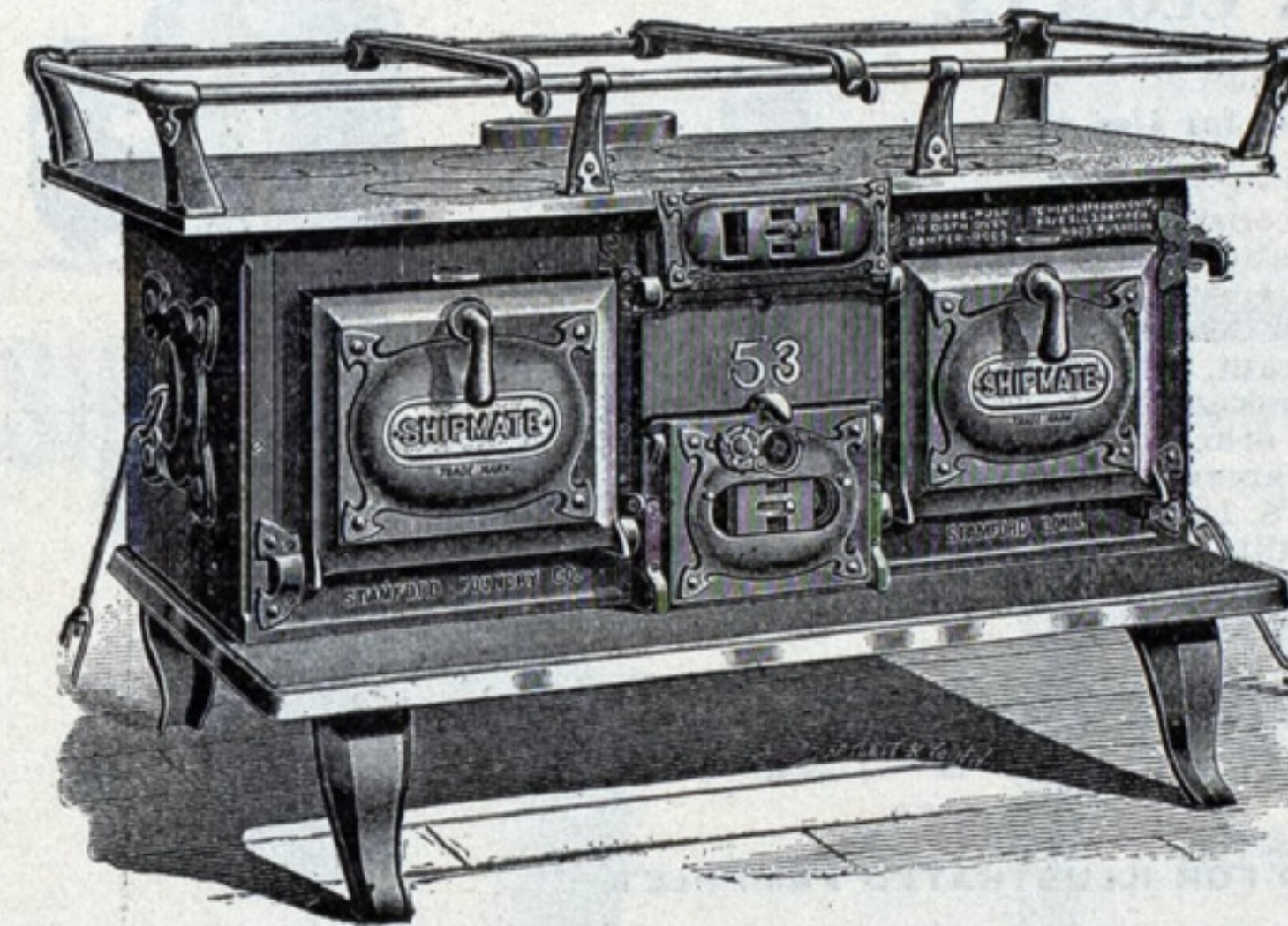


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